

217/782-2113

"REVISED"  
TITLE V - CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT  
and  
TITLE I PERMIT<sup>1</sup>

PERMITTEE

Safety-Kleen Systems, Inc. - Dolton Recycle Center  
Attn: Robert Burke, III, Environmental Compliance Manager  
633 East 138th Street  
Dolton, Illinois 60419-1058

<u>Application No.:</u> 95120114	<u>I.D. No.:</u> 031069AAJ
<u>Applicant's Designation:</u>	<u>Date Received:</u> December 7, 1995
<u>Operation of:</u> Solvent Recycling Center/Recovered Solvents	
<u>Date Issued:</u> March 24, 2000	<u>Expiration Date</u> <sup>2</sup> : March 24, 2005
<u>Source Location:</u> 633 East 138th Street, Dolton	
<u>Responsible Official:</u> Phillip H. Gover, Facility Manager	

This permit is hereby granted to the above-designated Permittee to OPERATE a solvent recycling center, pursuant to the above referenced permit application. This permit is subject to the conditions contained herein.

Revision Date Received: September 24, 2001  
Revision Date Issued: TO BE DETERMINED  
Purpose of Revision: Minor Modification

This minor modification makes the permit more stringent by moving certain transfer stations from Section 7.2 to Section 7.1, thereby making them subject to 40 CFR 63 Subpart DDD. In addition, the applicability language in Conditions 7.1.3(c) and 7.6.6(c) was modified. Finally, the address of the owner and operator and the responsible official were changed.

This document only contains those portions of the entire CAAPP permit that have been revised as a result of this permitting action. If a conflict exists between this document and previous versions of the CAAPP permit, this document supersedes those terms and conditions of the permit for which the conflict exists. The previous permit issued March 24, 2000 is incorporated herein by reference.

Please attach a copy of this amendment and the following revised pages to the front of the most recently issued entire permit.

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If you have any questions concerning this permit, please contact Jonathan Sperry at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:JS:jar

cc: Illinois EPA, FOS, Region 1  
USEPA

<sup>1</sup> This permit may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the CAA and regulations promulgated thereunder, including 40 CFR 52.21 - federal PSD and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within this permit.

<sup>2</sup> Except as provided in Condition 8.7 of this permit.



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1.0 SOURCE IDENTIFICATION

1.1 Source

Safety-Kleen Systems, Inc. - Dolton Recycle Center  
633 East 138th Street  
Dolton, Illinois 60419-1058  
708/849-4850

I.D. No.: 031069AAJ  
Standard Industrial Classification: 7389, Solvent Recovery on a  
Contract or Fee Basis

1.2 Owner/Parent Company

Safety-Kleen Systems, Inc.  
5400 Legacy Drive  
Cluster II, Building 3  
Plano, Texas 75024

1.3 Operator

Safety-Kleen Systems, Inc.  
5400 Legacy Drive  
Cluster II, Building 3  
Plano, Texas 75024

Phillip H. Gover, Facility Manager  
708/225-8100

1.4 General Source Description

The Safety-Kleen Systems, Inc. - Dolton Recycle Center is located at 633 East 138th Street, Dolton, Illinois. The source functions as a storage, recycling, and reclamation facility for a variety of used chemicals and solvents, solvent mixtures, solid and semi-solid materials, aqueous chemicals, and other organic wastes.

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

ACMA	Alternative Compliance Market Account
Act	Illinois Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711
ATU	Allotment Trading Unit
BAT	Best Available Technology
Btu	British thermal unit
°C	Celsius degree
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CFR	Code of Federal Regulations
C <sub>HAP</sub>	concentration of HAP
CO	carbon monoxide
C <sub>TOC</sub>	concentration of TOC
DOT	Department of Transportation
ERMS	Emission Reduction Market System
ft <sup>3</sup>	cubic feet
gal	gallon
g mole	gram mole
HAP	Hazardous Air Pollutant
hp	horsepower
hr	hour
IAC	Illinois Administrative Code
I.D. No.	Identification Number of Source, assigned by Illinois EPA
Illinois EPA	Illinois Environmental Protection Agency
kcal	kilocalorie
kg	kilogram
kPa	kilopascal
kW	kilowatts
LAER	Lowest Achievable Emission Rate
lb	pound
lb mole	pound mole
m	meter
m <sup>3</sup>	cubic meter
MACT	Maximum Achievable Control Technology
MBtu	Million British thermal units
MJ	megajoule
mo	month
mm	millimeter
mm Hg	millimeters mercury
MW	megawatt
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>x</sub>	Nitrogen Oxides
NSPS	New Source Performance Standards

OM	organic material
PM	Particulate Matter
PM <sub>10</sub>	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods
ppm	parts per million
ppmv	parts per million volume
PSD	Prevention of Significant Deterioration
psia	pounds per square inch absolute
°R	Rankine degree
RMP	Risk Management Plan
scm	standard cubic meter
sec	second
SIP	State Implementation Plan
SO <sub>2</sub>	Sulfur Dioxide
T	ton
TOC	Total Organic Compounds
T1	Title I - identifies Title I conditions that have been carried over from an existing construction permit
T1N	Title I New - identifies Title I conditions that are being established in this permit
T1R	Title I Revised - identifies Title I conditions that have been carried over from an existing construction permit and subsequently revised in this permit
USEPA	United States Environmental Protection Agency
VHAP	Volatile Hazardous Air Pollutant
VOC	Volatile Organic Compound
VOM	Volatile Organic Material
yr	year

### 3.0 INSIGNIFICANT ACTIVITIES

#### 3.1 Identification of Insignificant Activities

The following activities at the source constitute insignificant activities as specified in 35 IAC 201.210:

- 3.1.1 Activities determined by the Illinois EPA to be insignificant activities, pursuant to 35 IAC 201.210(a)(1) and 201.211, as follows:

Parts Washer Solvents Return and Fill Stations #1 (RF-1) and #2 (RF-2) and a 5 MBtu/Hr Oil-Fired Boiler

- 3.1.2 Activities that are insignificant activities based upon maximum emissions, pursuant to 35 IAC 201.210(a)(2) or (a)(3), as follows:

16 Gallon Drum Wash (DW-3) and Fill (DF-3)  
Paint Gun Cleaner

- 3.1.3 Activities that are insignificant activities based upon their type or character, pursuant to 35 IAC 201.210(a)(4) through (18), as follows:

Direct combustion units designed and used for comfort heating purposes and fuel combustion emission units as follows: (A) Units with a rated heat input capacity of less than 2.5 MBtu/hr that fire only natural gas, propane, or liquefied petroleum gas; (B) Units with a rated heat input capacity of less than 1.0 MBtu/hr that fire only oil or oil in combination with only natural gas, propane, or liquefied petroleum gas; and (C) Units with a rated heat input capacity of less than 200,000 Btu/hr which never burn refuse, or treated or chemically contaminated wood [35 IAC 201.210(a)(4)].

Storage tanks of organic liquids with a capacity of less than 10,000 gallons and an annual throughput of less than 100,000 gallons per year, provided the storage tank is not used for the storage of gasoline or any material listed as a HAP pursuant to Section 112(b) of the CAA [35 IAC 201.210(a)(10)].

Storage tanks of any size containing virgin or re-refined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil, or residual fuel oils [35 IAC 201.210(a)(11)].

Gas turbines and stationary reciprocating internal combustion engines of less than 112 kW (150 horsepower) power output [35 IAC 201.210(a)(15)].

Storage tanks of any size containing exclusively soaps, detergents, surfactants, glycerin, waxes, vegetable oils, greases, animal fats, sweeteners, corn syrup, aqueous salt solutions, or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials [35 IAC 201.210(a)(17)].

3.1.4 Activities that are considered insignificant activities pursuant to 35 IAC 201.210(b).

### 3.2 Compliance with Applicable Requirements

Insignificant activities are subject to applicable requirements notwithstanding status as insignificant activities. In particular, in addition to regulations of general applicability, such as 35 IAC 212.301 and 212.123 (Condition 5.2.2), the Permittee shall comply with the following requirements, as applicable:

3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.

3.2.2 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit's process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.

3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 218.301, or 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

### 3.3 Addition of Insignificant Activities

3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).

3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210(a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.

3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Unit	Description	Date Constructed	Emission Control Equipment or Techniques
Distillation Column, DC-3 Shredder System LUWA 1, L-1 Pot Still, PS-1 Pot Still, PS-2 Drum Handling, DH-1 & 2  LUWA 2, L-2 LUWA 3, L-3 Railcar Transfer Station Fuel Transfer Station Mineral Spirits Transfer Station	Process Units Engaged in Off-Site Waste and Recovery Operations	1984 1996 1972 1973 1973 1985 & 1989  1990 1990 - - -	Thermo Oxidizer, C-22  Condenser, C-19A Condenser, C-19B None None None
Drum Filling, DF-1 & 2  Finished Product Transfer Station	Process Units Not Engaged in Off-Site Waste and Recovery Operations	1990  -	Thermo Oxidizer, C-22  None
Tank Farms 4, 5, & 6  Tank Farms 7, 8, & 9  Tank Farm 14	Storage Tanks Engaged in Off-Site Waste and Recovery Operations	1989 & 1990  1990  1990	Condenser, C-18  None  Thermo Oxidizer, C-22
Tank Farms 1 & 2  Tank Farm 3  Tank Farm 13	Storage Tanks Not Engaged in Off-Site Waste and Recovery Operations	1988  1988  1990	Condenser, C-6  Condenser, C-18  None
Boiler #1, B-1 and Boiler #2, B-2	16.72 and 13.38 MBtu/Hr	1992 and 1988	None
Pumps, Valves, Open-Ended Lines, Connectors/Flanges, Relief Valves	Fugitive VOM Emissions	-	Inspection & Monitoring Program

5.0 OVERALL SOURCE CONDITIONS

5.1 Source Description

- 5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of VOM and HAP emissions.

5.2 Applicable Regulations

- 5.2.1 Specific emission units at this source are subject to particular regulations as set forth in Section 7 (Unit-Specific Conditions) of this permit.

- 5.2.2 In addition, emission units at this source are subject to the following regulations of general applicability:

- a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.

Compliance with this requirement is considered to be assured by the inherent nature of operations at this source, as demonstrated by historical operation.

- b. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124.

- 5.2.3 The Permittee shall comply with the standards for recycling and emissions reduction of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an

approved technician certification program pursuant to 40 CFR 82.161.

- 5.2.4 a. This stationary source, as defined in 40 CFR Section 68.3, is subject to 40 CFR Part 68, the Accidental Release Prevention regulations [40 CFR 68.215(a)(1)].
- b. The owner or operator of a stationary source shall revise and update the RMP submitted, as specified in 40 CFR 68.190.
- 5.2.5 a. Should this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by 40 CFR Part 70 or 71.
- b. No later than upon the submittal for renewal of this permit, the owner or operator shall submit, as part of an application, the necessary information to address either the non-applicability of, or demonstrate compliance with all applicable requirements of any potentially applicable regulation which was promulgated after the date issued of this permit.

5.3 Non-Applicability of Regulations of Concern

None

5.4 Source-Wide Operational and Production Limits and Work Practices

In addition to the source-wide requirements in the Standard Permit Conditions in Section 9, the Permittee shall fulfill the following source-wide operational and production limitations and/or work practice requirements:

None

5.5 Source-Wide Emission Limitations

5.5.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these

limits shall be determined on a calendar year basis. These limitations (Condition 5.5.1) are set for the purpose of establishing fees and are not federally enforceable.

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	64.40
Sulfur Dioxide (SO <sub>2</sub> )	0.10
Particulate Matter (PM)	0.30
Nitrogen Oxides (NO <sub>x</sub> )	23.20
HAP, not included in VOM or PM	14.6
Total	102.60

5.5.2 Emissions of Hazardous Air Pollutants

Source-wide emission limitations for HAPs as listed in Section 112(b) of the CAA are not set. This source is considered to be a major source of HAPs.

5.5.3 Other Source-Wide Emission Limitations

Other source-wide emission limitations are not set for this source pursuant to either the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21, Illinois EPA rules for Major Stationary Sources Construction and Modification, 35 IAC Part 203, or Section 502(b)(10) of the CAA. However, there may be unit specific emission limitations set forth in Section 7 of this permit pursuant to these rules.

5.6 General Recordkeeping Requirements

5.6.1 Emission Records

The Permittee shall maintain records of the following items for the source to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

Total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions) of this permit.

5.6.2 Records for Operating Scenarios

N/A

5.6.3 Retention and Availability of Records

- a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified

by the particular recordkeeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.

- b. The Permittee shall retrieve and print, on paper during normal source office hours, any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

## 5.7 General Reporting Requirements

### 5.7.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

### 5.7.2 Annual Emissions Report

The annual emissions report required pursuant to Condition 9.7 shall contain emissions information for the previous calendar year.

## 5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

## 5.9 General Compliance Procedures

### 5.9.1 General Procedures for Calculating Emissions

Compliance with the source-wide emission limits specified in Condition 5.5 shall be based on the recordkeeping and reporting requirements of Conditions 5.6 and 5.7, and Compliance Procedures in Section 7 (Unit Specific Conditions) of this permit.

## 6.0 EMISSIONS REDUCTION MARKET SYSTEM (ERMS)

### 6.1 Description of ERMS

The ERMS is a "cap and trade" market system for major stationary sources located in the Chicago ozone nonattainment area. It is designed to reduce VOM emissions from stationary sources to contribute to reasonable further progress toward attainment, as required by Section 182(c) of the CAA.

The ERMS addresses VOM emissions during a seasonal allotment period from May 1 through September 30. Once the ERMS begins, participating sources must hold "allotment trading units" (ATUs) for their actual seasonal VOM emissions. Each year participating sources are issued ATUs based on allotments set during initial issuance of the sources' CAAPP permits. These allotments are established from historical VOM emissions or "baseline emissions" lowered to provide the emissions reductions from stationary sources required for reasonable further progress.

By December 31 of each year, the end of the reconciliation period following the seasonal allotment period, each source shall have sufficient ATUs in its transaction account to cover its actual VOM emissions during the preceding season. A transaction account's balance as of December 31 will include any valid ATU transfer agreements entered into as of December 31 of the given year, provided such agreements are promptly submitted to the Illinois EPA for entry into the transaction account database. The Illinois EPA will then retire ATUs in sources' transaction accounts in amounts equivalent to their seasonal emissions. When a source does not appear to have sufficient ATUs in its transaction account, the Illinois EPA will issue a notice to the source to begin the process for Emissions Excursion Compensation.

In addition to receiving ATUs pursuant to their allotments, participating sources may also obtain ATUs from the market, including ATUs bought from other participating sources and general participants in the ERMS that hold ATUs (35 IAC 205.630) and ATUs issued by the Illinois EPA as a consequence of VOM emissions reductions from an Emissions Reduction Generator or an Intersector Transaction (35 IAC 205.500 and 35 IAC 205.510). During the reconciliation period, sources may also buy ATUs from a secondary reserve of ATUs managed by the Illinois EPA, the "Alternative Compliance Market Account" (ACMA) (35 IAC 205.710). Sources may also transfer or sell the ATUs that they hold to other sources or participants (35 IAC 205.630).

### 6.2 Applicability

This source is considered a "participating source" for purposes of the ERMS, 35 IAC Part 205.

### 6.3 Obligation to Hold Allotment Trading Units (ATUs)

- a. Pursuant to 35 IAC 205.150(c)(1) and 35 IAC 205.720, and as further addressed by Condition 6.8, as of December 31 of each year, this source shall hold ATUs in its account in an amount not less than the ATU equivalent of its VOM emissions during the preceding seasonal allotment period (May 1 - September 30), not including VOM emissions from the following, or the source shall be subject to "emissions excursion compensation," as described in Condition 6.5.
  - i. VOM emissions from insignificant emission units and activities as identified in Section 3 of this permit, in accordance with 35 IAC 205.220;
  - ii. Excess VOM emissions associated with startup, malfunction, or breakdown of an emission unit as authorized in Section 7.0 of this permit, in accordance with 35 IAC 205.225;
  - iii. Excess VOM emissions to the extent allowed by a Variance, Consent Order, or Compliance Schedule, in accordance with 35 IAC 205.320(e)(3);
  - iv. Excess VOM emissions that are a consequence of an emergency as approved by the Illinois EPA, pursuant to 35 IAC 205.750; and
  - v. VOM emissions from certain new and modified emission units as addressed by Condition 6.8(b), if applicable, in accordance with 35 IAC 205.320(f).
- b. Notwithstanding the above condition, in accordance with 35 IAC 205.150(c)(2), if a source commences operation of a major modification, pursuant to 35 IAC Part 203, the source shall hold ATUs in an amount not less than 1.3 times its seasonal VOM emissions attributable to such major modification during the seasonal allotment period, determined in accordance with the construction permit for such major modification or applicable provisions in Section 7.0 of this permit.

### 6.4 Market Transactions

- a. The source shall apply to the Illinois EPA for and obtain authorization for a Transaction Account prior to conducting any market transactions, as specified at 35 IAC 205.610(a).
- b. The Permittee shall promptly submit to the Illinois EPA any revisions to the information submitted for its Transaction Account, pursuant to 35 IAC 205.610(b).

- c. The source shall have at least one account officer designated for its Transaction Account, pursuant to 35 IAC 205.620(a).
- d. Any transfer of ATUs to or from the source from another source or general participant must be authorized by a qualified Account Officer designated by the source and approved by the Illinois EPA, in accordance with 35 IAC 205.620, and the transfer must be submitted to the Illinois EPA for entry into the Transaction Account database.

#### 6.5 Emissions Excursion Compensation

Pursuant to 35 IAC 205.720, if the source fails to hold ATUs in accordance with Condition 6.3, it shall provide emissions excursion compensation in accordance with the following:

- a. Upon receipt of an Excursion Compensation Notice issued by the Illinois EPA, the source shall purchase ATUs from the ACMA in the amount specified by the notice, as follows:
  - i. The purchase of ATUs shall be in an amount equivalent to 1.2 times the emissions excursion; or
  - ii. If the source had an emissions excursion for the seasonal allotment period immediately before the period for the present emissions excursion, the source shall purchase ATUs in an amount equivalent to 1.5 times the emissions excursion.
- b. If requested in accordance with paragraph (c) below or in the event that the ACMA balance is not adequate to cover the total emissions excursion amount, the Illinois EPA will deduct ATUs equivalent to the specified amount or any remaining portion thereof from the ATUs to be issued to the source for the next seasonal allotment period.
- c. Pursuant to 35 IAC 205.720(c), within 15 days after receipt of an Excursion Compensation Notice, the owner or operator may request that ATUs equivalent to the amount specified be deducted from the source's next seasonal allotment by the Illinois EPA, rather than purchased from the ACMA.

#### 6.6 Quantification of Seasonal VOM Emissions

- a. The methods and procedures specified in Sections 5 and 7 of this permit for determining VOM emissions and compliance with VOM emission limitations shall be used for determining seasonal VOM emissions for purposes of the ERMS, with the following exceptions [35 IAC 205.315(b)]:

No exceptions

- b. The Permittee shall report emergency conditions at the source to the Illinois EPA, in accordance with 35 IAC 205.750, if the Permittee intends to deduct VOM emissions in excess of the technology-based emission rates normally achieved that are attributable to the emergency from the source's seasonal VOM emissions for purposes of the ERMS. These reports shall include the information specified by 35 IAC 205.750(a), and shall be submitted in accordance with the following:
  - i. An initial emergency conditions report within two days after the time when such excess emissions occurred due to the emergency; and
  - ii. A final emergency conditions report, if needed to supplement the initial report, within 10 days after the conclusion of the emergency.

#### 6.7 Annual Account Reporting

- a. For each year in which the source is operational, the Permittee shall submit, as a component of its Annual Emissions Report, seasonal VOM emissions information to the Illinois EPA for the seasonal allotment period. This report shall include the following information [35 IAC 205.300]:
  - i. Actual seasonal emissions of VOM from the source;
  - ii. A description of the methods and practices used to determine VOM emissions, as required by this permit, including any supporting documentation and calculations;
  - iii. A detailed description of any monitoring methods that differ from the methods specified in this permit, as provided in 35 IAC 205.337;
  - iv. If a source has experienced an emergency, as provided in 35 IAC 205.750, the report shall reference the associated emergency conditions report that has been approved by the Illinois EPA;
  - v. If a source's baseline emissions have been adjusted due to a Variance, Consent Order, or CAAPP permit Compliance Schedule, as provided for in 35 IAC 205.320(e)(3), the report shall provide documentation quantifying the excess VOM emissions during the season that were allowed by the Variance, Consent Order, or Compliance Schedule, in accordance with 35 IAC 205.320(e)(3); and

vi. If a source is operating a new or modified emission unit for which three years of operational data is not yet available, as specified in 35 IAC 205.320(f), the report shall specify seasonal VOM emissions attributable to the new emission unit or the modification of the emission unit.

b. This report shall be submitted by November 30 of each year, for the preceding seasonal allotment period.

#### 6.8 Allotment of ATUs to the Source

a. i. The allotment of ATUs to this source is 219 ATUs per seasonal allotment period.

ii. This allotment of ATUs reflects the Illinois EPA's determination that the source's baseline emissions were 24.1944 tons per season.

A. This determination includes the use of 1995 and 1996 as baseline seasons.

B. This determination includes adjustment to actual emissions to account for voluntary over-compliance at the source, pursuant to 35 IAC 205.320(d), as further addressed in Section 7 of this permit.

iii. The source's allotment reflects 88% of the baseline emissions (12% reduction), except for the VOM emissions from specific emission units excluded from such reduction, pursuant to 35 IAC 205.405, including units complying with MACT or using BAT, as identified in Condition 6.11 of this permit.

iv. ATUs will be issued to the source's Transaction Account by the Illinois EPA annually. These ATUs will be valid for the seasonal allotment period following issuance and, if not retired in this season, the next seasonal allotment period.

v. Condition 6.3(a) becomes effective beginning in the seasonal allotment period following the initial issuance of ATUs by the Illinois EPA into the Transaction Account for the source.

b. Contingent Allotments for New or Modified Emission Units

The source was issued a construction permit prior to January 1, 1998 for the following new or modified emission units for which three years of operational data is not yet available:

Emission Unit	Construction Permit No.	Date Issued	Maximum Available Allotment	Explanation of Maximum Allotment
Drum Shredder System	95060216	9/21/95	5.5 Tons minus vat system emissions	5.12 of annual emission limit; provision that the vat system should be removed from routine service

In accordance with 35 IAC 205.310(h) and 35 IAC 205.320(f), the source shall submit a written request for, or an application for, a revised emissions baseline and allotment which address these emissions baseline and allotment which address these emission units by December 1 of the year of the third complete seasonal allotment period in which each such newly constructed or modified emission unit is operational. Such submittal shall include information from the affected emission units on the seasonal emissions for these first three seasonal allotment periods.

- c. Notwithstanding the above, part or all of the above ATUs will not be issued to the source in circumstances as set forth in 35 IAC Part 205, including:
  - i. Transfer of ATUs by the source to another participant or the ACMA, in accordance with 35 IAC 205.630;
  - ii. Deduction of ATUs as a consequence of emissions excursion compensation, in accordance with 35 IAC 205.720; and
  - iii. Transfer of ATUs to the ACMA, as a consequence of shutdown of the source, in accordance with 35 IAC 205.410.

#### 6.9 Recordkeeping for ERMS

The Permittee shall maintain copies of the following documents as its Compliance Master File for purposes of the ERMS [35 IAC 205.700(a)]:

- a. Seasonal component of the Annual Emissions Report;
- b. Information on actual VOM emissions, as specified in detail in Sections 5 and 7 of this permit and Condition 6.6(a); and
- c. Any transfer agreements for the purchase or sale of ATUs and other documentation associated with the transfer of ATUs.

## 6.10 Federal Enforceability

Section 6 becomes federally enforceable upon approval of the ERMS by USEPA as part of Illinois' State Implementation Plan.

## 6.11 Exclusions from Further Reductions

a. VOM emissions from the following emission units shall be excluded from the VOM emissions reductions requirements specified in 35 IAC 205.400(c) and (e) as long as such emission units continue to satisfy the following [35 IAC 205.405(a)]:

- i. Emission units that comply with any NESHAP or MACT standard promulgated pursuant to the CAA;
- ii. Direct combustion emission units designed and used for comfort heating purposes, fuel combustion emission units, and internal combustion engines; and
- iii. An emission unit for which a LAER demonstration has been approved by the Illinois EPA on or after November 15, 1990.

The source has demonstrated in its ERMS application and the Illinois EPA has determined that the following emission units qualify for exclusion from further reductions because they meet the criteria as indicated above [35 IAC 205.405(a) and (c)]:

Boilers B-1 and B-2

b. VOM emissions from emission units using BAT for controlling VOM emissions shall not be subject to the VOM emissions reductions requirement specified in 35 IAC 205.400(c) or (e) as long as such emission unit continues to use such BAT [35 IAC 205.405(b)].

The source has demonstrated in its ERMS application and the Illinois EPA has determined that the following emission units qualify for exclusion from further reductions because these emission units use BAT for controlling VOM emissions as indicated above [35 IAC 205.405(b) and (c)]:

Fugitives from pumps, valves, connectors, open-ended equipment, and pressure relief valves

7.0 UNIT SPECIFIC CONDITIONS

7.1 Units: Process units engaged in off-site waste and recovery operations

Controls: Thermo Oxidizer and condensers

7.1.1 Description

Drum handling, evaporation, and fractional distillation equipment used to recycle and reclaim a variety of used chemicals and solvents, solvent mixtures, solid and semi-solid materials, aqueous chemicals, and other organic wastes.

7.1.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Distillation Column, DC-3	Fractional Distillation Column	Thermo Oxidizer, C-22
Shredder System	Drum Handling and Processing	Thermo Oxidizer, C-22
LUWA 1, L-1	Thin Film Evaporator	Thermo Oxidizer, C-22
Pot Still, PS-1	Simple Evaporator	Thermo Oxidizer, C-22
Pot Still, PS-2	Simple Evaporator	Thermo Oxidizer, C-22
Drum Handling, DH-1 & 2	Processing of Waste Materials	Thermo Oxidizer, C-22
LUWA 2, L-2	Thin Film Evaporator	Condenser, C-19A
LUWA 3, L-3	Thin Film Evaporator	Condenser, C-19B
Railcar Transfer Station	Load Out Operations	None
Fuel Transfer Station	Load Out Operations	None
Mineral Spirits Transfer Station	Load Out Operations	None

7.1.3 Applicability Provisions and Applicable Regulations

- a. The "affected off-site waste and recovery operations" for the purpose of these unit-specific conditions, are units subject to 40 CFR 63 Subpart DD "National Emission Standards for Off-site Waste and Recovery Operations". As of the "date issued" as shown on page 1 of this permit, the affected off-site waste and recovery operations are identified in Condition 7.1.2.

- b. The affected off-site waste and recovery operations are subject to 35 IAC 218 Subparts G and TT.
- c. The affected off-site waste and recovery operations are subject to 40 CFR 63 Subpart DD. To streamline the applicable requirements for the source, the Illinois EPA finds that compliance with 40 CFR 63, Subpart DD assures compliance with 35 IAC 218 Subparts G and TT.

#### 7.1.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected off-site waste and recovery operations not being subject to the New Source Performance Standards (NSPS) for the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 60, Subparts VV, III, NNN, and RRR; the National Emission Standards For Hazardous Air Pollutants for the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 63, Subparts F, G, H, and I; or the Organic Material Emission Standards and Limitations for the Chicago Area, 35 IAC 218, Subparts Q and RR, because the affected off-site waste and recovery operations are not engaged in the manufacture of organic chemicals.
- b. This permit is issued based on the affected off-site waste and recovery operations not being subject to the National Emission Standards For Hazardous Air Pollutants for benzene, 40 CFR 61, Subparts J, Y, BB, and FF, because affected off-site waste and recovery operations are not operating in benzene service and the facility is not a benzene production facility, bulk terminal, chemical manufacturing plant, coke by-product recovery plant, or petroleum refinery.

#### 7.1.5 Control Requirements

- a. For a container having a design capacity greater than 0.1 m<sup>3</sup> and less than or equal to 0.46 m<sup>3</sup> or for a container having a design capacity greater than 0.46 m<sup>3</sup> and the container is not in light-material service as defined in 40 CFR 63.681, the owner or operator shall control air emissions from the container in accordance with the standards for Container Level 1 controls [40 CFR 63.688(b)(1) and (2)]
  - i. A container using Container Level 1 controls is one of the following: [40 CFR 63.922(b)]
    - A. A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous

materials for transportation as specified in Condition 7.1.5(a) (iv).

- B. A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container (e.g., a lid on a drum, a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (e.g., a bulk cargo container equipped with a screw-type cap).
  - C. An open-top container in which an organic vapor-suppressing barrier is placed on or over the regulated-material in the container such that no regulated-material is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam.
- ii. A container used to meet the requirements of either Condition 7.1.5(a) (i) (B) or (C) shall be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the regulated-material to the atmosphere and to maintain the equipment integrity for as long as it is in service. Factors to be considered when selecting the materials for and designing the cover and closure devices shall include: organic vapor permeability, the effects of contact with the material or its vapor managed in the container; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for container on which the cover is installed. [40 CFR 63.922(c)]
  - iii. Whenever a regulated-material is in a container using Container Level 1 controls, the owner or operator shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as follows: [40 CFR 63.922(d)]

- A. Opening of a closure device or cover is allowed for the purpose of adding material to the container as follows:
1. In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.
  2. In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either: the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaves the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.
- B. Opening of a closure device or cover is allowed for the purpose of removing material from the container as follows:
1. For the purpose of meeting the requirements of this section, an empty container as defined in 40 CFR 63.921 may be open to the atmosphere at any time (e.g., covers and closure devices are not required to be secured in the closed position on an empty container).
  2. In the case when discrete quantities or batches of material are removed from the container but the container does not meet the

conditions to be an empty container as defined in 40 CFR 63.921, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes, or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

- C. Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of regulated-material. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.
- D. Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the container internal pressure in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the container internal pressure is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable,

explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the container internal pressure exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

- E. Opening of a safety device, as defined in 40 CFR 63.921, is allowed at any time conditions require it to do so to avoid an unsafe condition.
- iv. For the purpose of compliance with Condition 7.1.5(a) (i) (A), containers shall be used that meet the applicable U.S. DOT regulations on packaging hazardous materials for transportation as follows: [40 CFR 63.922(f)]
- A. The container meets the applicable requirements specified in 49 CFR part 178—Specifications for Packagings or 49 CFR part 179—Specifications for Tank Cars.
  - B. Regulated-material is managed in the container in accordance with the applicable requirements specified in 49 CFR part 107 subpart B—Exemptions; 49 CFR part 172—Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements; 49 CFR part 173—Shippers—General Requirements for Shipments and Packaging; and 49 CFR part 180—Continuing Qualification and Maintenance of Packagings.
  - C. For the purpose of complying with this subpart, no exceptions to the 49 CFR part 178 or part 179 regulations are allowed except as provided for in Condition 7.1.5(a) (iv) (D).
  - D. For a lab pack that is managed in accordance with the requirements of 49 CFR part 178 for the purpose of complying with this condition, an owner or operator may comply with the exceptions for those packagings specified in 49 CFR 173.12(b).

- b. For a container having a design capacity greater than 0.46 m<sup>3</sup> and the container is in light-material service as defined in 40 CFR 63.681, the owner or operator shall control air emissions from the container in accordance with the standards for Container Level 2 controls [40 CFR 63.688(b)(3)]
  - i. A container using Container Level 2 controls is one of the following: [40 CFR 63.923(b)]
    - A. A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as specified in Condition 7.1.5(b)(iv).
    - B. A container that has been demonstrated to operate with no detectable organic emissions as defined in 40 CFR 63.921.
    - C. A container that has been demonstrated within the preceding 12 months to be vapor-tight by using Method 27 in Appendix A of 40 CFR part 60 in accordance with the procedure specified in Condition 7.1.7(b).
  - ii. Transfer of regulated-material in to or out of a container using Container Level 2 controls shall be conducted in such a manner as to minimize exposure of the regulated-material to the atmosphere, to the extent practical, considering the physical properties of the regulated-material and good engineering and safety practices for handling flammable, ignitable, explosive, or other hazardous materials. Examples of container loading procedures that meet the requirements of this paragraph include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the regulated-material is filled, with subsequent purging of the transfer line before removing it from the container opening. [40 CFR 63.923(c)]
  - iii. Whenever a regulated-material is in a container using Container Level 2 controls, the owner or operator shall install all covers

and closure devices for the container, and secure and maintain each closure device in the closed position except as follows: [40 CFR 63.923(d)]

A. Opening of a closure device or cover is allowed for the purpose of adding material to the container as follows:

1. In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.
2. In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level, the completion of a batch loading after which no additional material will be added to the container within 15 minutes, the person performing the loading operation leaves the immediate vicinity of the container, or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

B. Opening of a closure device or cover is allowed for the purpose of removing material from the container as follows:

1. For the purpose of meeting the requirements of this section, an empty container as defined in 40 CFR 63.921 may be open to the atmosphere at any time (e.g., covers and closure devices are not required to be secured in the closed position on an empty container).

2. In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in 40 CFR 63.921, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.
- C. Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of regulated-material. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.
  - D. Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the container internal pressure in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the container internal pressure is within the internal pressure operating range determined by the owner or operator based on container manufacturer

recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the container internal pressure exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

- E. Opening of a safety device, as defined in 40 CFR 63.921, is allowed at any time conditions require it to do so to avoid an unsafe condition.

iv. For the purpose of compliance with Condition 7.1.5(b)(i)(A), containers shall be used that meet the applicable U.S. DOT regulations on packaging hazardous materials for transportation as follows: [40 CFR 63.923(f)]

- A. The container meets the applicable requirements specified in 49 CFR part 178—Specifications for Packagings or 49 CFR part 179—Specifications for Tank Cars.
- B. Regulated-material is managed in the container in accordance with the applicable requirements specified in 49 CFR part 107 subpart B—Exemptions; 49 CFR part 172—Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements; 49 CFR part 173—Shippers—General Requirements for Shipments and Packaging; and 49 CFR part 180—Continuing Qualification and Maintenance of Packagings.
- C. For the purpose of complying with this subpart, no exceptions to the 49 CFR part 178 or part 179 regulations are allowed except as provided for in Condition 7.1.5(b)(iv)(D).
- D. For a lab pack that is managed in accordance with the requirements of 49

CFR part 178 for the purpose of complying with this condition, an owner or operator may comply with the exceptions for those packagings specified in 49 CFR 173.12(b).

c. For each transfer system that is an affected off-site waste and recovery operation but is not an individual drain system, the owner or operator shall control air emissions by using one of the transfer systems specified in Conditions 7.1.5(c) (i) through (iii).  
[40 CFR 63.689(c)]

i. A transfer system that uses covers in accordance with the requirements specified in Conditions 7.1.5(c) (i) (A) through (F).

A. The cover and its closure devices shall be designed to form a continuous barrier over the entire surface area of the off-site material as it is conveyed by the transfer system except for the openings at the inlet and outlet to the transfer system through which the off-site material passes. The inlet and outlet openings used for passage of the off-site material through the transfer system shall be the minimum size required for practical operation of the transfer system.

B. The cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section joints or between the interface of the cover edge and its mounting.

C. Except for the inlet and outlet openings to the transfer system through which the off-site material passes, each opening in the cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device.

D. The cover and its closure devices shall be made of suitable materials that will minimize exposure of the off-site material to the atmosphere, to the extent practical, and will maintain the

integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the cover and closure devices shall include: organic vapor permeability; the effects of any contact with the material or its vapors conveyed in the transfer system; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the transfer system on which the cover is installed.

- E. Whenever an off-site material is in the transfer system, the cover shall be installed with each closure device secured in the closed position except as specified in Conditions 7.1.5(c) (i) (E) (1) or (2).
    - 1. Opening of closure devices or removal of the cover is allowed to provide access to the transfer system for performing routine inspection, maintenance, repair, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a hatch or remove the cover to repair conveyance equipment mounted under the cover or to clear a blockage of material inside the system. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable.
    - 2. Opening of a safety device, as defined in 40 CFR 63.681, is allowed at any time conditions require it to do so to avoid an unsafe condition.
  - F. The owner or operator shall inspect the air emission control equipment in accordance with the requirements specified in Condition 7.1.8.
- ii. A transfer system that consists of continuous hard-piping. All joints or seams between the pipe sections shall be permanently or semi-permanently sealed (e.g., a welded joint

between two sections of metal pipe or a bolted and gasketed flange).

- iii. A transfer system that is enclosed and vented through a closed-vent system to a control device in accordance with the requirements specified in Conditions 7.1.5(c) (iii) (A) and (B).
  - A. The transfer system is designed and operated such that an internal pressure in the vapor headspace in the enclosure is maintained at a level less than atmospheric pressure when the control device is operating, and
  - B. The closed-vent system and control device are designed and operated in accordance with the requirements of 40 CFR 63.693.
- d. The owner or operator must route the vent stream from each affected process vent through a closed-vent system to a control device that meets the standards specified in Conditions 7.1.5(d)-(h). For the purpose of complying with this Condition 7.1.5(d), a primary condenser is not a control device; however, a second condenser or other organic recovery device that is operated downstream of the primary condenser is considered a control device. [40 CFR 63.690(b)]
  - i. The owner or operator must use a closed-vent system that meets the requirements specified in Condition 7.1.5(e). [40 CFR 63.693(b) (1)]
  - ii. The owner or operator must use a control device that meets the requirements specified in Conditions 7.1.5(f) through (h) as applicable to the type and design of the control device selected by the owner or operator to comply with the provisions of Condition 7.1.5. [40 CFR 63.693(b) (2)]
  - iii. Whenever gases or vapors containing HAP are vented through a closed-vent system connected to a control device used to comply with this condition, the control device must be operating except at those times listed below. [40 CFR 63.693(b) (3)]
    - A. The control device may be bypassed for the purpose of performing planned routine maintenance of the closed-vent system or control device in situations when the routine maintenance cannot be performed

during periods that the emission point vented to the control device is shutdown. On an annual basis, the total time that the closed-vent system or control device is bypassed to perform routine maintenance shall not exceed 240 hours per each calendar year.

- B. The control device may be bypassed for the purpose of correcting a malfunction of the closed-vent system or control device. The owner or operator shall perform the adjustments or repairs necessary to correct the malfunction as soon as practicable after the malfunction is detected.

- iv. In the case when an owner or operator chooses to use a design analysis to demonstrate compliance of a control device with the applicable performance requirements specified in Conditions 7.1.5(f)-(h), the Administrator may request that the design analysis be revised or amended by the owner or operator to correct any deficiencies identified by the Administrator. If the owner or operator and the Administrator do not agree on the acceptability of using the design analysis (including any changes requested by the Administrator) to demonstrate that the control device achieves the applicable performance requirements, then the disagreement must be resolved using the results of a performance test conducted by the owner or operator in accordance with the requirements of Condition 7.1.7(g). The Administrator may choose to have an authorized representative observe the performance test conducted by the owner or operator. Should the results of this performance test not agree with the determination of control device performance based on the design analysis, then the results of the performance test will be used to establish compliance with this subpart. [40 CFR 63.693(b)(8)]

- v. A process vent is exempted from the requirements of this Condition 7.1.5(d) when the owner or operator meets one of the exemptions provided in Conditions 7.1.5(d)(v)(A) or (B). [40 CFR 63.683(c)(2)]

- A. A process vent is exempted from the requirements specified in Condition

7.1.5(d) if the owner or operator determines that the process vent stream flow rate is less than 0.005 cubic meters per minute ( $\text{m}^3/\text{min}$ ) at standard conditions (as defined in 40 CFR 63.2). The process vent stream flow rate shall be determined in accordance with the procedures specified in Condition 7.1.7(h). Documentation must be prepared by the owner or operator and maintained at the plant site to support the determination of the process vent stream flow rate. This documentation must include identification of each process vent exempted under this paragraph and the test results used to determine the process vent stream flow rate.

- B. A process vent is exempted from the requirements specified in Condition 7.1.5(d) if the owner or operator determines that the process vent stream flow rate is less than  $6.0 \text{ m}^3/\text{min}$  at standard conditions (as defined in 40 CFR 63.2) and the total HAP concentration is less than 20 ppmv. The process vent stream flow rate and total HAP concentration shall be determined in accordance with the procedures specified in Condition 7.1.7(h). Documentation must be prepared by the owner or operator and maintained at the plant site to support the determination of the process vent stream flow rate and total HAP concentration. This documentation must include identification of each process vent exempted under this Condition 7.1.5(d) (v) (B) and the test results used to determine the process vent stream flow rate and total HAP concentration. The owner or operator must perform a new determination of the process vent stream flow rate and total HAP concentration when the extent of changes to operation of the unit on which the process vent is used could cause either the process vent stream flow rate to exceed the limit of  $6.0 \text{ m}^3/\text{min}$  or the total HAP concentration to exceed the limit of 20 ppmv.

- e. Closed-vent system requirements. [40 CFR 63.693(c)]
  - i. The vent stream required to be controlled shall be conveyed to the control device by either of the following closed-vent systems:
    - A. A closed-vent system that is designed to operate with no detectable organic emissions using the procedure specified in Condition 7.1.7(f); or
    - B. A closed-vent system that is designed to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gage or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.
  - ii. In situations when the closed-vent system includes bypass devices that could be used to divert a vent stream from the closed-vent system to the atmosphere at a point upstream of the control device inlet, each bypass device must be equipped with either a flow indicator as specified in Condition 7.1.5(e)(ii)(A) or a seal or locking device as specified in Condition 7.1.5(e)(ii)(B). For the purpose of complying with this Condition 7.1.5(e)(ii), low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, or pressure relief valves needed for safety reasons are not subject to the requirements of this Condition 7.1.5(e)(ii).
    - A. If a flow indicator is used, the indicator must be installed at the entrance to the bypass line used to divert the vent stream from the closed-vent system to the atmosphere. The flow indicator must indicate a reading at least once every 15 minutes. The owner or operator must maintain records of the following information: hourly records of whether the flow indicator was operating and whether flow was detected at any time during the hour; and records of all periods when flow is detected or the flow indicator is not operating.
    - B. If a seal or locking device is used, the bypass line valve must be secured in the

non-diverting position with a car-seal or a lock-and-key type configuration. The seal or locking device must be placed on the mechanism by which the bypass device position is controlled (e.g., valve handle, damper lever) when the bypass device is in the non-diverting position such that the bypass device cannot be moved to the diverting position without breaking the seal or removing the lock. The owner or operator must visually inspect the seal or closure mechanism at least once every month to determine that the bypass line valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line.

- f. Condenser control device requirements. The condenser must achieve the performance specifications in either Condition 7.1.5(f) (i) or (ii). [40 CFR 63.693(e) (1)]
  - i. Recover 95 percent or more, on a weight-basis, of the total organic compounds (TOC), less methane and ethane, contained in the vent stream entering the condenser; or
  - ii. Recover 95 percent or more, on a weight-basis, of the total HAP, listed in Table 1 of 40 CFR 63 Subpart DD, contained in the vent stream entering the condenser.
- g. Vapor incinerator control device requirements. The vapor incinerator must achieve the performance specifications in either Condition 7.1.5(g) (i), (ii), or (iii). [40 CFR 63.693(f) (1)]
  - i. Destroy the total organic compounds (TOC), less methane and ethane, contained in the vent stream entering the vapor incinerator either:
    - A. By 95 percent or more, on a weight-basis, or
    - B. To achieve a total incinerator outlet concentration for the TOC, less methane and ethane, of less than or equal to 20 ppmv on a dry basis corrected to 3 percent oxygen.
  - ii. Destroy the HAP listed in Table 1 of 40 CFR 63 Subpart DD contained in the vent stream entering the vapor incinerator either:

- A. By 95 percent or more, on a total HAP weight-basis, or
  - B. To achieve a total incinerator outlet concentration for the HAP, listed in Table 1 of 40 CFR 63 Subpart DD, of less than or equal to 20 ppmv on a dry basis corrected to 3 percent oxygen.
- iii. Maintain the conditions in the vapor incinerator combustion chamber at a residence time of 0.5 seconds or longer and at a temperature of 760°C or higher.
- h. Flare control device requirements. The flare must be designed and operated in accordance with the requirements in 40 CFR 63.11(b). [40 CFR 63.693(h) (1)]

7.1.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected off-site waste and recovery operations are subject to the following:

Emissions from the affected off-site waste and recovery operations shall not exceed the following limits:

<u>Unit</u>	<u>Operating Hours (hr/yr)</u>	<u>VOM Emissions (lb/hr) (T/yr)</u>		<u>Permit</u>
Distillation Column (DC-3)	---	---	6.0	84080085
Drum Emptying Unit (DH-1)	---	---	2.0	85100035
Drum Dumping (DH-2)	8,760	1.5	6.6	89030012
LUWA #2 (L-2)	8,760	0.25	1.1	90080055
LUWA #3 (L-3)	8,760	0.25	1.1	90080055
Drum Shredder Unit	8,760	3.0	13.2	95060216

Also, permit 95060216, limits the use of the existing vat system as standby equipment only.

These limits are based on the maximum production rate of each piece of equipment.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1R].

The above limitations contain revisions to previously issued Permits. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, production rates were eliminated since they are no longer used in determining emissions and all operating hour limits were raised to 8760 hr/yr without increasing annual emissions. [T1R].

#### 7.1.7 Testing Requirements

- a. Procedure for determining no detectable organic emissions for the purpose of complying with Condition 7.1.5(a) and (b). [40 CFR 63.925(a)]
  - i. The test shall be conducted in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the container, its cover, and associated closure devices, as applicable to the container, shall be checked. Potential leak interfaces that are associated with containers include, but are not limited to: the interface of the cover rim and the container wall; the periphery of any opening on the container or container cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.
  - ii. The test shall be performed when the container filled with a material having an organic HAP concentration representative of the range of

concentrations for the regulated-materials expected to be managed in this type of container. During the test, the container cover and closure devices shall be secured in the closed position.

- iii. The detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the organic constituents in the material placed in the container, not for each individual organic constituent.
- iv. The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.
- v. Calibration gases shall be as follows:
  - A. Zero air (less than 10 ppmv hydrocarbon in air); and
  - B. A mixture of methane in air at a concentration of approximately, but less than 10,000 ppmv.
- vi. The background level shall be determined according to the procedures in Method 21 of 40 CFR part 60 appendix A.
- vii. Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (e.g., some pressure relief devices), the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.
- viii. The arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of 500 ppmv. If the difference is less than 500 ppmv, then the

potential leak interface is determined to operate with no detectable organic emissions.

- b. Procedure for determining a container to be vapor-tight for the purpose of complying with Condition 7.1.5(b) (i) (C). [40 CFR 63.925(b)]
  - i. The test shall be performed in accordance with Method 27 of 40 CFR part 60, appendix A.
  - ii. A pressure measurement device shall be used that has a precision of  $\pm 2.5$  mm water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness.
  - iii. If the test results determined by Method 27 indicate that the container sustains a pressure change less than or equal to 750 Pascals within 5 minutes after it is pressurized to a minimum of 4,500 Pascals, then the container is determined to be vapor-tight.
- c. The owner or operator must demonstrate that a condenser achieves the performance requirements in Condition 7.1.5(f) by either performing a performance test as specified in Condition 7.1.7(c) (i) or a design analysis as specified in Condition 7.1.7(c) (ii). [40 CFR 63.693(e) (2)]
  - i. An owner or operator choosing to use a performance tests to demonstrate compliance must conduct the test in accordance with the requirements of Condition 7.1.7(g).
  - ii. An owner or operator choosing to use a design analysis to demonstrate compliance must include as part of this design analysis the following information: description of the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature; and specification of the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet.
- d. The owner or operator must demonstrate that a vapor incinerator achieves the performance requirements in Condition 7.1.5(g) by either performing a performance test as specified in Condition 7.1.7(d) (i) or a

design analysis as specified in Condition 7.1.7(d) (ii). [40 CFR 63.693(f) (2)]

- i. An owner or operator choosing to use a performance test to demonstrate compliance must conduct the test in accordance with the requirements of Condition 7.1.7(g).
  - ii. An owner or operator choosing to use a design analysis to demonstrate compliance must include as part of this design analysis the following information for a thermal vapor incinerator: the design analysis shall address the vent stream composition, constituent concentrations, and flow rate and shall establish the design minimum and average temperatures in the combustion chamber and the combustion chamber residence time.
- e. The owner or operator must demonstrate that the flare achieves the requirements in Condition 7.1.5(h) by performing the procedures specified in Condition 7.1.7(e) (i). A previous compliance demonstration for the flare that meets all of the conditions specified in Condition 7.1.7(e) (ii) may be used by an owner or operator to demonstrate compliance with this Condition 7.1.7(e). [40 CFR 63.693(h) (2)]
- i. To demonstrate that a flare achieves the requirements in Condition 7.1.5(h), the owner or operator performs all of the procedures specified in Conditions 7.1.7(e) (i) (A) through (C).
    - A. The owner or operator conducts a visible emission test for the flare in accordance with the requirements specified in 40 CFR 63.11(b) (4).
    - B. The owner or operator determines the net heating value of the gas being combusted in the flare in accordance with the requirements specified in 40 CFR 63.11(b) (6); and
    - C. The owner or operator determines the flare exit velocity in accordance with the requirements applicable to the flare design as specified in 40 CFR 63.11(b) (7) or 40 CFR 63.11(b) (8).
  - ii. A previous compliance demonstration for the flare may be used by an owner or operator to demonstrate compliance with Condition 7.1.7(e)

provided that all conditions for the compliance determination and subsequent flare operation are met as specified in Condition 7.1.7(e) (ii) (A) and (B).

- A. The owner or operator conducted the compliance determination using the procedures specified in Condition 7.1.7(e) (i).
  - B. No flare operating parameter or process changes have occurred since completion of the compliance determination which could affect the compliance determination results.
- f. Procedure for determining no detectable organic emissions for the purpose of complying with Condition 7.1.5(e) (i) (A). [40 CFR 63.694(k)]
- i. The test shall be conducted in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the cover and associated closure devices shall be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: the interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.
  - ii. The test shall be performed when the unit contains a material having a total organic concentration representative of the range of concentrations for the materials expected to be managed in the unit. During the test, the cover and closure devices shall be secured in the closed position.
  - iii. The detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the organic constituents in the material placed in the unit, not for each individual organic constituent.
  - iv. The detection instrument shall be calibrated before use on each day of its use by the

procedures specified in Method 21 of 40 CFR part 60, appendix A.

- v. Calibration gases shall be as follows:
  - A. Zero air (less than 10 ppmv hydrocarbon in air); and
  - B. A mixture of methane or n-hexane in air at a concentration of approximately, but less than, 10,000 ppmv.
- vi. An owner or operator may choose to adjust or not adjust the detection instrument readings to account for the background organic concentration level. If an owner or operator chooses to adjust the instrument readings for the background level, the background level value must be determined according to the procedures in Method 21 of 40 CFR part 60, appendix A.
- vii. Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (e.g., some pressure relief devices), the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.
- viii. An owner or operator must determine if a potential leak interface operates with no detectable emissions using the applicable procedure specified in Condition 7.1.7(f) (viii) (A) or (B).
  - A. If an owner or operator chooses not to adjust the detection instrument readings for the background organic concentration level, then the maximum organic concentration value measured by the detection instrument is compared directly to the applicable value for the potential leak interface as specified in Condition 7.1.7(f) (ix).

- B. If an owner or operator chooses to adjust the detection instrument readings for the background organic concentration level, the value of the arithmetic difference between the maximum organic concentration value measured by the instrument and the background organic concentration value as determined in Condition 7.1.7(f) (vi) is compared with the applicable value for the potential leak interface as specified in Condition 7.1.7(f) (ix).
- ix. A potential leak interface is determined to operate with no detectable emissions using the applicable criteria specified in Conditions 7.1.7(f) (ix) (A) and (B).
    - A. For a potential leak interface other than a seal around a shaft that passes through a cover opening, the potential leak interface is determined to operate with no detectable organic emissions if the organic concentration value determined in Condition 7.1.7(f) (viii) is less than 500 ppmv.
    - B. For a seal around a shaft that passes through a cover opening, the potential leak interface is determined to operate with no detectable organic emissions if the organic concentration value determined in Condition 7.1.7(f) (viii) is less than 10,000 ppmv.
- g. Control device performance test procedures. [40 CFR 63.694(1)]
    - i. Method 1, or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites at the inlet and outlet of the control device.
      - A. To determine compliance with a control device percent reduction requirement, sampling sites shall be located at the inlet of the control device as specified in Condition 7.1.7(g) (i) (A) (1) and (2), and at the outlet of the control device.
        - 1. The control device inlet sampling site shall be located after the final product recovery device.

2. If a vent stream is introduced with the combustion air or as a auxiliary fuel into a boiler or process heater, the location of the inlet sampling sites shall be selected to ensure that the measurement of total HAP concentration or TOC concentration, as applicable, includes all vent streams and primary and secondary fuels introduced into the boiler or process heater.

B. To determine compliance with an enclosed combustion device concentration limit, the sampling site shall be located at the outlet of the device.

ii. The gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

iii. To determine compliance with the control device percent reduction requirement, the owner or operator shall use Method 18 of 40 CFR part 60, appendix A; alternatively, any other method or data that has been validated according to the applicable procedures in Method 301 in 40 CFR part 63, appendix A may be used. The following procedures shall be used to calculate percent reduction efficiency:

A. The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time such as 15 minute intervals during the run.

B. The mass rate of either TOC (minus methane and ethane) or total HAP (EI and EO, respectively) shall be computed.

1. The following equations shall be used:

$$E_i = K_2 \left( \sum_{j=1}^{150} n C_{ij} M_{ij} \right) Q_i$$

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$$E_o = K_2 (\sum_{j=1}^{150} n C_{oj} M_{oj}) Q_o$$

Where:

$C_{ij}, C_{oj}$ = Concentration of sample component j of the gas stream at the inlet and outlet of the control device, respectively, dry basis, parts per million by volume.

$E_i, E_o$ = Mass rate of TOC (minus methane and ethane) or total HAP at the inlet and outlet of the control device, respectively, dry basis, kilogram per hour.

$M_{ij}, M_{oj}$ = Molecular weight of sample component j of the gas stream at the inlet and outlet of the control device, respectively, gram/gram-mole.

$Q_i, Q_o$ = Flow rate of gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meter per minute.

$K_2$ = Constant,  $2.494 \cdot 10^{-6}$  (parts per million)<sup>-1</sup>(gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature (gram-mole per standard cubic meter) is 20 °C.

2. When the TOC mass rate is calculated, all organic compounds (minus methane and ethane) measured by Method 18 of 40 CFR part 60, appendix A shall be summed using the equation in Condition 7.1.7(g) (iii) (B) (1).

3. When the total HAP mass rate is calculated, only the HAP constituents shall be summed using the equation in Condition 7.1.7(g) (iii) (B) (1).

C. The percent reduction in TOC (minus methane and ethane) or total HAP shall be calculated as follows:

$$R_{cd} = (E_i - E_o) / E_i \times 100$$

Where:

$R_{cd}$  = Control efficiency of control device, percent.

$E_i$  = Mass rate of TOC (minus methane and ethane) or total HAP at the inlet to the control device as calculated under Condition 7.1.7(g) (iii) (B), kilograms TOC per hour or kilograms HAP per hour.

$E_o$  = Mass rate of TOC (minus methane and ethane) or total HAP at the outlet of the control device, as calculated under Condition 7.1.7(g) (iii) (B), kilograms TOC per hour or kilograms HAP per hour.

D. If the vent stream entering a boiler or process heater is introduced with the combustion air or as a secondary fuel, the weight-percent reduction of total HAP or TOC (minus methane and ethane) across the device shall be determined by comparing the TOC (minus methane and ethane) or total HAP in all combusted vent streams and primary and secondary fuels with the TOC (minus methane and ethane) or total HAP exiting the device, respectively.

iv. To determine compliance with the enclosed combustion device total HAP concentration limit of this subpart, the owner or operator shall use Method 18 of 40 CFR part 60, appendix A to measure either TOC (minus methane and ethane) or total HAP. Alternatively, any other method or data that has been validated according to Method 301 in appendix A of this part, may be used. The

following procedures shall be used to calculate parts per million by volume concentration, corrected to 3 percent oxygen:

A. The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

B. The TOC concentration or total HAP concentration shall be calculated according to Condition 7.1.7(h) (iv) (B) (1) or (2).

1. The TOC concentration ( $C_{\text{TOC}}$ ) is the sum of the concentrations of the individual components and shall be computed for each run using the following equation:

$$C_{\text{TOC}} = \sum_{i=1}^x \left( \sum_{j=1}^n C_{ij} / x \right)$$

Where:

$C_{\text{TOC}}$  = Concentration of total organic compounds minus methane and ethane, dry basis, parts per million by volume.

$C_{ji}$  = Concentration of sample components j of sample i, dry basis, parts per million by volume.

n = Number of components in the sample.

x = Number of samples in the sample run.

2. The total HAP concentration ( $C_{\text{HAP}}$ ) shall be computed according to the equation in Condition 7.1.7(g) (iv) (B) (1) except that only HAP constituents shall be summed.

C. The measured TOC concentration or total HAP concentration shall be corrected to 3 percent oxygen as follows:

1. The emission rate correction factor or excess air, integrated sampling and analysis procedures of Method 3B of 40 CFR part 60, appendix A shall be used to determine the oxygen concentration (%O<sub>2</sub> dry). The samples shall be collected during the same time that the samples are collected for determining TOC concentration or total HAP concentration.
2. The concentration corrected to 3 percent oxygen (C<sub>c</sub>) shall be computed using the following equation:

$$C_c = C_m (17.9 / (20.9 - \%O_{2 \text{ dry}}))$$

Where:

C<sub>c</sub> = TOC concentration or total HAP concentration corrected to 3 percent oxygen, dry basis, parts per million by volume.

C<sub>m</sub> = Measured TOC concentration or total HAP concentration, dry basis, parts per million by volume.

%O<sub>2</sub> dry = Concentration of oxygen, dry basis, percent by volume.

- h. Determination of process vent stream flow rate and total HAP concentration. [40 CFR 63.694(m)]
  - i. Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, must be used for selection of the sampling site.
  - ii. No traverse site selection method is needed for vents smaller than 0.10 meter in diameter.
  - iii. Process vent stream gas volumetric flow rate must be determined using Method 2, 2A, 2C, or

2D of 40 CFR part 60, appendix A, as appropriate.

- iv. Process vent stream total HAP concentration must be measured using the following procedures:
- A. Method 18 of 40 CFR part 60, appendix A, must be used to measure the total HAP concentration. Alternatively, any other method or data that has been validated according to the protocol in Method 301 of appendix A of this part may be used.
  - B. Where Method 18 of 40 CFR part 60, appendix A, is used, the following procedures must be used to calculate parts per million by volume concentration:
    - 1. The minimum sampling time for each run must be 1 hour in which either an integrated sample or four grab samples must be taken. If grab sampling is used, then the samples must be taken at approximately equal intervals in time, such as 15 minute intervals during the run.
    - 2. The total HAP concentration (CHAP) must be computed according to the following equation:

$$C_{HAP} = \sum_{i=1}^x (\sum_{j=1}^n C_{ji}) / X$$

Where:

$C_{HAP}$  = Total concentration of HAP compounds listed in Table 1 of 40 CFR 63 Subpart DD, dry basis, parts per million by volume.

$C_{ji}$  = Concentration of sample component j of the sample i, dry basis, parts per million by volume.

n = Number of components in the sample.

x = Number of samples in the sample run.

#### 7.1.8 Inspection and Monitoring Requirements

- a. Owners and operators of containers using either Container Level 1 or Container Level 2 controls in accordance with the provisions of Condition 7.1.5(a) and (b), respectively, shall inspect the container and its cover and closure devices as follows: [40 CFR 63.926(a)]
  - i. In the case when a regulated-material already is in the container at the time the owner or operator first accepts possession of the container at the facility site and the container is not emptied (i.e., does not meet the conditions for an empty container) within 24 hours after the container arrives at the facility site, the container and its cover and closure devices shall be visually inspected by the owner or operator to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Condition 7.1.8(a) (iii).
  - ii. In the case when a container used for managing regulated-material remains at the facility site for a period of 1 year or more, the container and its cover and closure devices shall be visually inspected by the owner or operator initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (a) (3) of this section.
  - iii. When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than 24 hours after detection and repair shall be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the regulated-material shall be removed from the container and the container shall not

be used to manage regulated-material until the defect is repaired.

- b. The owner or operator must inspect and monitor each closed-vent system in accordance with the requirements specified in either Condition 7.1.8(b) (i) or (b) (ii) below. [40 CFR 63.693(b) (4)]
  - i. The owner or operator inspects and monitors the closed-vent system in accordance with the requirements specified in Condition 7.1.8(f), and complies with the applicable recordkeeping requirements in Condition 7.1.9 and the applicable reporting requirements in Condition 7.1.10.
  - ii. As an alternative to meeting the requirements specified in Condition 7.1.8(b) (i), the owner or operator may choose to inspect and monitor the closed-vent system in accordance with the requirements under 40 CFR part 63, subpart H—National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks as specified in 40 CFR 63.172(f) through (h), and complies with the applicable recordkeeping requirements in 40 CFR 63.181 and the applicable reporting requirements in 40 CFR 63.182.
- c. The owner or operator must monitor the operation of the condenser in accordance with the requirements of Condition 7.1.8(g) using one of the continuous monitoring systems specified in Conditions 7.1.8(c) (i) through (iii). [40 CFR 63.693(e) (3)]
  - i. A continuous parameter monitoring system to measure and record the daily average temperature of the exhaust gases from the control device. The accuracy of the temperature monitoring device shall be  $\pm 1$  percent of the temperature being measured, expressed in degrees Celsius or  $\pm 5^{\circ}\text{C}$ , whichever is greater.
  - ii. A continuous monitoring system to measure and record the daily average concentration of organic compounds in the exhaust vent stream from the control device. The accuracy of the concentration monitoring device shall be  $\pm 1$  percent of the concentration being measured.
  - iii. A continuous monitoring system that measures other alternative operating parameters upon

approval of the Administrator as specified in 40 CFR 63.8(f)(1) through (f)(5).

- d. The owner or operator must monitor the operation of the vapor incinerator in accordance with the requirements of Condition 7.1.8(g) using one of the continuous monitoring systems specified in Conditions 7.1.8(d)(i) through (iii). [40 CFR 63.693(f)(3)]
  - i. For a thermal vapor incinerator, a continuous parameter monitoring system to measure and record the daily average temperature of the exhaust gases from the control device. The accuracy of the temperature monitoring device must be  $\pm 1$  percent of the temperature being measured, expressed in degrees Celsius of  $\pm 0.5^{\circ}\text{C}$ , whichever is greater.
  - ii. For any type of vapor incinerator, a continuous monitoring system to measure and record the daily average concentration of organic compounds in the exhaust vent stream from the control device. The accuracy of the concentration monitoring device must be  $\pm 1$  percent of the concentration being measured.
  - iii. For any type of vapor incinerator, a continuous monitoring system that measures alternative operating parameters other than those specified in Condition 7.1.8(d)(i) upon approval of the Administrator as specified in 40 CFR 63.8(f)(1) through (f)(5).
- e. The owner or operator must monitor the operation of the flare using a heat sensing monitoring device (including but not limited to a thermocouple, ultraviolet beam sensor, or infrared sensor) that continuously detects the presence of a pilot flame. The owner or operator must record, for each 1-hour period, whether the monitor was continuously operating and whether a pilot flame was continuously present during each hour as required in 40 CFR 63.696(b)(3). [40 CFR 63.693(h)(3)]
- f. Owners and operators that use a closed-vent system in accordance with the provisions of Condition 7.1.5(e) shall meet the following inspection and monitoring requirements: [40 CFR 63.695(c)]
  - i. Each closed-vent system that is used to comply with Condition 7.1.5(e)(i)(A) shall be inspected and monitored in accordance with the following requirements:

- A. At initial startup, the owner or operator shall monitor the closed-vent system components and connections using the procedures specified in Condition 7.1.7(f) to demonstrate that the closed-vent system operates with no detectable organic emissions.
- B. After initial startup, the owner or operator shall inspect and monitor the closed-vent system as follows:
  - 1. Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange) shall be visually inspected at least once per year to check for defects that could result in air emissions. The owner or operator shall monitor a component or connection using the procedures specified in Condition 7.1.7(f) to demonstrate that it operates with no detectable organic emissions following any time the component is repaired or replaced (e.g., a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (e.g., a flange is unbolted).
  - 2. Closed-vent system components or connections other than those specified in Condition 7.1.8(f) (i) (B) (1), shall be monitored at least once per year using the procedures specified in Condition 7.1.7(f) to demonstrate that components or connections operate with no detectable organic emissions.
- C. In the event that a defect or leak is detected, the owner or operator shall repair the defect or leak in accordance with the requirements of Condition 7.1.8(f) (iii).
- D. The owner or operator shall maintain a record of the inspection and monitoring

in accordance with the requirements specified in Condition 7.1.9.

- ii. Each closed-vent system that is used to comply with Condition 7.1.5(e) (i) (B) shall be inspected and monitored in accordance with the following requirements:
  - A. The closed-vent system shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork or piping; loose connections; or broken or missing caps or other closure devices.
  - B. The owner or operator must perform an initial inspection following installation of the closed-vent system. Thereafter, the owner or operator must perform the inspections at least once every calendar year except as provided for in Condition 7.1.8(h).
  - C. In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Condition 7.1.8(f) (iii).
  - D. The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Condition 7.1.9.
- iii. The owner or operator shall repair all detected defects as follows:
  - A. The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection.
  - B. Repair of a defect may be delayed beyond 45 calendar days if either of the conditions specified in Condition 7.1.8(f) (iii) (B) (1) or (2) occurs. In this case, the owner or operator must repair the defect the next time the process or unit that vents to the closed-vent system is shutdown. Repair of the

defect must be completed before the process or unit resumes operation.

1. Completion of the repair is technically infeasible without the shutdown of the process or unit that vents to the closed-vent system.
2. The owner or operator determines that the air emissions resulting from the repair of the defect within the specified period would be greater than the fugitive emissions likely to result by delaying the repair until the next time the process or unit that vents to the closed-vent system is shutdown.

C. The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in Condition 7.1.9.

g. Control device monitoring requirements. For each control device required under Conditions 7.1.5(f) through (h) to be monitored in accordance with the provisions of this Condition 7.1.8(g), the owner or operator must ensure that each control device operates properly by monitoring the control device in accordance with the requirements specified in Conditions 7.1.8(g) (i) through (vii). [40 CFR 63.695(e)]

i. A continuous parameter monitoring system must be used to measure the operating parameter or parameters specified for the control device in Condition 7.1.5(f) and (g) as applicable to the type and design of the control device. The continuous parameter monitoring system must meet the following specifications and requirements:

A. The continuous parameter monitoring system must measure either an instantaneous value at least once every 15 minutes or an average value for intervals of 15 minutes or less and continuously record either:

1. Each measured data value; or

2. Each block average value for each 1-hour period or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values.
- B. The monitoring system must be installed, calibrated, operated, and maintained in accordance with the manufacturer's specifications or other written procedures that provide reasonable assurance that the monitoring equipment is operating properly.
- ii. Using the data recorded by the monitoring system, the owner or operator must calculate the daily average value for each monitored operating parameter for each operating day. If operation of the control device is continuous, the operating day is a 24-hour period. If control device operation is not continuous, the operating day is the total number of hours of control device operation per 24-hour period. Valid data points must be available for 75 percent of the operating hours in an operating day to compute the daily average.
  - iii. For each monitored operating parameter, the owner or operator must establish a minimum operating parameter value or a maximum operating parameter value, as appropriate, to define the range of conditions at which the control device must be operated to continuously achieve the applicable performance requirements specified in Condition 7.1.5(d) (ii). Each minimum or maximum operating parameter value must be established in accordance with the requirements in Conditions 7.1.8(g) (iii) (A) and (B).
  - A. If the owner or operator conducts a performance test to demonstrate control device performance, then the minimum or maximum operating parameter value must be established based on values measured during the performance test and supplemented, as necessary, by the control device design specifications,

manufacturer recommendations, or other applicable information.

- B. If the owner or operator uses a control device design analysis to demonstrate control device performance, then the minimum or maximum operating parameter value must be established based on the control device design analysis and supplemented, as necessary, by the control device manufacturer recommendations or other applicable information.

iv. An excursion for a given control device is determined to have occurred when the monitoring data or lack of monitoring data result in any one of the criteria specified in Conditions 7.1.8(g) (iv) (A) through (C) being met. When multiple operating parameters are monitored for the same control device and during the same operating day more than one of these operating parameters meets an excursion criterion specified in Conditions 7.1.8(g) (iv) (A) through (C), then a single excursion is determined to have occurred for the control device for that operating day.

- A. An excursion occurs when the daily average value of a monitored operating parameter is less than the minimum operating parameter limit (or, if applicable, greater than the maximum operating parameter limit) established for the operating parameter in accordance with the requirements of Condition 7.1.8(g) (iii).

- B. An excursion occurs when the period of control device operation is 4 hours or greater in an operating day and the monitoring data are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours. Monitoring data are insufficient to constitute a valid hour of data if measured values are unavailable for any of the 15-minute periods within the hour.

- C. An excursion occurs when the period of control device operation is less than 4 hours in an operating day and more than 1 of the hours during the period does not constitute a valid hour of data due to

insufficient monitoring data. Monitoring data are insufficient to constitute a valid hour of data if measured values are unavailable for any of the 15-minute periods within the hour.

- v. For each excursion, except as provided for in Condition 7.1.8(g) (vi), the owner or operator shall be deemed to have failed to have applied control in a manner that achieves the required operating parameter limits. Failure to achieve the required operating parameter limits is a violation of this standard.
- vi. An excursion is not a violation of this standard under any one of the conditions specified in Conditions 7.1.8(g) (vi) (A) and (B).
  - A. An excursion is not a violation nor does it count toward the number of excused excursions allowed under Condition 7.1.8(g) (vi) (B) when the excursion occurs during any one of the following periods:
    - 1. During a period of startup, shutdown, or malfunction when the affected facility is operated during such period in accordance with the facility's startup, shutdown, and malfunction plan; or
    - 2. During periods of non-operation of the unit or the process that is vented to the control device (resulting in cessation of HAP emissions to which the monitoring applies).
  - B. For each control device, one excused excursion is allowed per semiannual period for any reason. The initial semiannual period is the 6-month reporting period addressed by the first semiannual report submitted by the owner or operator in accordance with Condition 7.1.10(c) (iv).
- vii. Nothing in Conditions 7.1.8(g) (i) through (vi) shall be construed to allow or excuse a monitoring parameter excursion caused by any activity that violates other applicable provisions of this permit.

- h. Alternative inspection and monitoring interval. Following the initial inspection and monitoring of a piece of air pollution control equipment in accordance with the applicable provisions of this condition, subsequent inspection and monitoring of the equipment may be performed at intervals longer than 1 year when an owner or operator determines that performing the required inspection or monitoring procedures would expose a worker to dangerous, hazardous, or otherwise unsafe conditions and the owner or operator complies with the requirements specified in Conditions 7.1.8(h) (i) and (ii). [40 CFR 63.695(f)]
  - i. The owner or operator must prepare and maintain at the plant site written documentation identifying the specific air pollution control equipment designated as "unsafe to inspect and monitor." The documentation must include for each piece of air pollution control equipment designated as such a written explanation of the reasons why the equipment is unsafe to inspect or monitor using the applicable procedures under this condition.
  - ii. The owner or operator must develop and implement a written plan and schedule to inspect and monitor the air pollution control equipment using the applicable procedures specified in this condition during times when a worker can safely access the air pollution control equipment. The required inspections and monitoring must be performed as frequently as practicable but do not need to be performed more frequently than the periodic schedule that would be otherwise applicable to the air pollution control equipment under the provisions of this condition. A copy of the written plan and schedule must be maintained at the plant site.

#### 7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected off-site waste and recovery operations to demonstrate compliance with Conditions 5.5.1 and 7.1, pursuant to Section 39.5(7) (b) of the Act:

- a. The owner or operator shall comply with the recordkeeping requirements in 40 CFR 63.10 under 40 CFR 63 subpart A—General Provisions that are

applicable as specified in Table 2 of 40 CFR 63 subpart DD. [40 CFR 63.696(a) and (b)]

- b. An owner or operator shall record, on a semiannual basis, the information specified in Condition 7.1.9(b) (i) and (ii) for those planned routine maintenance operations that would require the control device not to meet the requirements of Conditions 7.1.5(f) through (h), as applicable. [40 CFR 63.696(g)]
  - i. A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.
  - ii. A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description shall include the type of maintenance performed and the total number of hours during these 6 months that the control device did not meet the requirement of Conditions 7.1.5(f) through (h), as applicable, due to planned routine maintenance.
- c. An owner or operator shall record the information specified in Conditions 7.1.9(c) (i) through (iii) for those unexpected control device system malfunctions that would require the control device not to meet the requirements of Conditions 7.1.5(f) through (h), as applicable. [40 CFR 63.696(h)]
  - i. The occurrence and duration of each malfunction of the control device system.
  - ii. The duration of each period during a malfunction when gases, vapors, or fumes are vented from the waste management unit through the closed-vent system to the control device while the control device is not properly functioning.
  - iii. Actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation.
- d. The Permittee shall keep the following records, on a monthly basis, of the exhaust gas to each process vent manifold: volumetric flow rate, estimated

partial pressure of VOM in exhaust gas, estimated molecular weight of VOM in exhaust gas, hours of operation, and VOM emissions (T/mo and T/yr).

- e. For the equipment with limits for VOM emissions in pounds per hour, as specified in Condition 7.1.6, records for these limits must be kept.

#### 7.1.10 Reporting Requirements

- a. The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected off-site waste and recovery operations with the permit requirements, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken
- b. Each owner or operator of an affected source must comply with the notification requirements specified in Condition 7.1.10(b)(i) and the reporting requirements specified in Condition 7.1.10(b)(ii). [40 CFR 63.697(a)]
  - i. The owner or operator of an affected source must submit notices to the Administrator in accordance with the applicable notification requirements in 40 CFR 63.9 as specified in Table 2 of 40 CFR 63 subpart DD. For the purpose of this subpart, an owner or operator subject to the initial notification requirements under 40 CFR 63.9(b)(2) must submit the required notification on or before October 19, 1999.
  - ii. The owner or operator of an affected source must submit reports to the Administrator in accordance with the applicable reporting requirements in 40 CFR 63.10 as specified in Table 2 of 40 CFR 63 subpart DD.
- c. The owner or operator of a control device used to meet the requirements of Condition 7.1.5 shall submit the following notifications and reports to the Administrator: [40 CFR 63.697(b)]
  - i. A Notification of Performance Tests specified in 40 CFR 63.7 and 63.9(g),
  - ii. Performance test reports specified in 40 CFR 63.10(d)(2), and
  - iii. Startup, shutdown, and malfunction reports specified in 40 CFR 63.10(d)(5).

- A. If actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are not completely consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the owner or operator shall state such information in the report. The startup, shutdown, or malfunction report shall consist of a letter, containing the name, title, and signature of the responsible official who is certifying its accuracy, that shall be submitted to the Administrator, and
  - B. Separate startup, shutdown, or malfunction reports are not required if the information is included in the summary report specified in Condition 7.1.10(c)(iv).
- iv. A summary report specified in 40 CFR 63.10(e)(3) shall be submitted on a semiannual basis (i.e., once every 6-month period). The summary report must include a description of all excursions as defined in Condition 7.1.8(g) that have occurred during the 6-month reporting period. For each excursion caused when the daily average value of a monitored operating parameter is less than the minimum operating parameter limit (or, if applicable, greater than the maximum operating parameter limit), the report must include the daily average values of the monitored parameter, the applicable operating parameter limit, and the date and duration of the period that the exceedance occurred. For each excursion caused by lack of monitoring data, the report must include the date and duration of period when the monitoring data were not collected and the reason why the data were not collected.

#### 7.1.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected off-site waste and recovery operations without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction

or modification of the source, as defined in 35 IAC 201.102:

Process any material at this source provided that the emission limitations in Conditions 5.5.1 and 7.1.6 are not exceeded and the affected off-site waste and recovery operations remain in compliance with this permit, 40 CFR 63 subpart DD, or any other applicable standard.

#### 7.1.12 Compliance Procedures

Compliance with the emission limits in Conditions 5.5.1, 5.5.3, and 7.1.6 shall be based on the recordkeeping requirements in Condition 7.1.9 and the formula listed below:

$$VOM = ((V_T \times P_g) / (R \times T)) \times MW_g \times (1-CE) \times OT / 2000$$

Where:

- VOM = VOM emission rate, T/yr
- $V_T$  = Volumetric flow rate of exhaust gas, ft<sup>3</sup>/hr
- $P_g$  = Estimated partial pressure of VOM in exhaust gas, psia
- R = Ideal gas constant, 10.731 psia ft<sup>3</sup>/lb-mole °R
- T = Temperature, °R
- $MW_g$  = Estimated molecular weight of VOM in exhaust gas, lb/lb-mole
- CE = Control efficiency of a given control device, fraction controlled
- OT = Hours of operation for a given 12 month period, hr/yr

7.2 Unit: Process units not engaged in off-site waste and recovery operations

Control: Thermo Oxidizer and Condenser

7.2.1 Description

Drum filling of 5 and 55 gallon drums with recycled and reclaimed chemicals and solvents, solvent mixtures, aqueous chemicals, and other organic materials and material load out to and from trucks and rail cars.

7.2.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Drum Fill, DF-1	5 Gallon Drum Fill	Thermo Oxidizer, C-22
Drum Fill, DF-2	55 Gallon Drum Fill	Thermo Oxidizer, C-22
Finished Product Transfer Station	Load Out Operations	None

7.2.3 Applicability Provisions and Applicable Regulations

- a. The "affected drum fill operations" for the purpose of these unit-specific conditions, are units subject to 35 IAC 218 Subparts G and TT. As of the "date issued" as shown on page 1 of this permit, the affected drum fill operations are identified in Condition 7.1.2.
- b. The "affected load out operations" for the purpose of these unit-specific conditions, are units subject to 35 IAC 218 Subpart G.. As of the "date issued" as shown on page 1 of this permit, the affected load out operations are identified in Condition 7.1.2.

7.2.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected drum fill and load out operations not being subject to 40 CFR 63 Subpart DD "National Emission Standards for Off-site Waste and Recovery Operations", because the affected drum fill operations do not receive off-site materials as defined in 40 CFR 63.680(b) and the affected load out operations are not an affected source as defined in 40 CFR 63.680(c).
- b. This permit is issued based on the affected drum fill and load out operations not being subject to the New Source Performance Standards (NSPS) for the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 60, Subparts VV, III, NNN, and RRR; the National Emission Standards For Hazardous Air Pollutants for the

Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 63, Subparts F, G, H, and I; or the Organic Material Emission Standards and Limitations for the Chicago Area, 35 IAC 218, Subparts Q and RR, because the affected drum fill operations are not engaged in the manufacture of organic chemicals.

- c. This permit is issued based on the affected drum fill and load out operations not being subject to the National Emission Standards For Hazardous Air Pollutants for benzene, 40 CFR 61, Subparts J, Y, BB, and FF, because the affected drum fill operations are not operating in benzene service and the facility is not a benzene production facility, bulk terminal, chemical manufacturing plant, coke by-product recovery plant, or petroleum refinery.
- d. This permit is issued based on the affected load out operations not being subject to 35 IAC 218 Subpart TT, because the affected load out operations are regulated by 35 IAC 218 Subpart B. [35 IAC 218.980(a)(1)]

#### 7.2.5 Control Requirements

- a. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission unit, except as provided in Conditions 7.2.5(a)(i), (ii), and (iii) and the following exception: If no odor nuisance exists the limitation of this condition shall apply only to photochemically reactive material. [35 IAC 218.301 and 218.302]
  - i. Flame, thermal or catalytic incineration so as either to reduce such emissions to 10 ppm equivalent methane (molecular weight 16) or less, or to convert 85 percent of the hydrocarbons to carbon dioxide and water; or,
  - ii. A vapor recovery system which adsorbs and/or condenses at least 85 percent of the total uncontrolled organic material that would otherwise be emitted to the atmosphere; or,
  - iii. Any other air pollution control equipment approved by the Illinois EPA and approved by the USEPA as a SIP revision capable of reducing by 85 percent or more the uncontrolled organic material that would be otherwise emitted to the atmosphere.
- b. Every owner or operator of an emission unit subject to 35 IAC 218 Subpart TT shall comply with the

following requirement: Emission capture and control equipment which achieve an overall reduction in uncontrolled VOM emissions of at least 81 percent from each emission unit. [35 IAC 218.986(a)]

- c. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere during the loading of any organic material from the aggregate loading pipes of any loading area having through-put of greater than 151 cubic meters per day (40,000 gal/day) into any railroad tank car, tank truck or trailer unless such loading area is equipped with submerged loading pipes or a device that is equally effective in controlling emissions and is approved by the Illinois EPA according to the provisions of 35 Ill. Adm. Code 201, and further processed consistent with 35 IAC 218.108. Exception: If no odor nuisance exists the limitations of this Condition shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294°3K (70°F). [35 IAC 218.122(a) and (c)]

7.2.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected drum fill operations are subject to the following:

Emissions from the affected drum fill operations shall not exceed the following limits:

<u>Unit</u>	<u>Hours of Operation (hr/yr)</u>	<u>VOM Emissions (lb/hr) (T/yr)</u>		<u>Permit</u>
Product Filling (DF-2)	---	---	9.0	88050073
5-Gal Drum Fill (DF-1)	8,760	2.5	2.0	90060054

Also, permit 88050073 limits the product filling equipment to loading of product only.

These limits are based on the maximum production rate of each piece of equipment.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1R].

The above limitations contain revisions to previously issued Permits. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the operating hour limit was raised to 8760 hr/yr without increasing annual emissions. [T1R]

#### 7.2.7 Testing Requirements

- a. When in the opinion of the Illinois EPA it is necessary to conduct testing to demonstrate compliance with Condition 7.2.5(b), the owner or operator of a VOM emission unit subject to the requirements of this condition shall, at his own expense, conduct such tests in accordance with the applicable test methods and procedures specified in 35 IAC 218.105. [35 IAC 218.988(a) and 218.991(a) (4) (A)]
- b. Nothing in this permit shall limit the authority of the USEPA pursuant to the Clean Air Act, as amended, to require testing. [35 IAC 218.988(b) and 218.991(a) (4) (B)]

#### 7.2.8 Inspection and Monitoring Requirements

None

#### 7.2.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected drum fill operations to demonstrate compliance with Conditions 5.5.1 and 7.2.5, pursuant to Section 39.5(7) (b) of the Act:

- a. On and after a date consistent with 35 IAC 218.106, or on and after the initial start-up date, the owner

or operator of a subject VOM source shall collect and record all of the following information each day and maintain the information at the source: [35 IAC 218.991(a)(2)]

- i. Control device monitoring data;
  - ii. A log of operating time for the capture system, control device, monitoring equipment and the associated emission source;
  - iii. A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.
- b. The Permittee shall keep the following records, on a monthly basis, of the exhaust gas to each process vent manifold: volumetric flow rate, estimated partial pressure of VOM in exhaust gas, estimated molecular weight of VOM in exhaust gas, hours of operation, and VOM emissions (T/mo and T/yr).
  - c. For the 5-gal drum fill (DF-1) records for average VOM emissions in pounds per hour for each month must be kept.

#### 7.2.10 Reporting Requirements

- a. The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected drum fill operations with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.
- b. By a date consistent with 35 IAC 218.106, or upon initial start-up of a new emission unit, the owner or operator of the subject VOM emission unit shall demonstrate to the Illinois EPA that the subject emission unit will be in compliance on and after a date consistent with 35 IAC 218.106, or on and after the initial start-up date by submitting to the Illinois EPA all calculations and other supporting data, including descriptions and results of any tests the owner or operator may have performed. [35 IAC 218.991(a)(1)]
- c. On and after a date consistent with 35 IAC 218.106, the owner or operator of a subject VOM emission source shall notify the Illinois EPA of any violation of the requirements of Condition 7.2.5(b) by sending

a copy of any record showing a violation to the Illinois EPA within 30 days following the occurrence of the violation. [35 IAC 218.991(a)(3)(A)]

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected drum fill operations without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

Process any material at this source provided that the emission limitations in Conditions 5.5.1 and 7.2.6 are not exceeded and the affected drum fill operations remain in compliance with this permit, 35 IAC 218 Subparts G and TT, or any other applicable standard.

7.2.12 Compliance Procedures

Compliance with the emission limits in Conditions 5.5.1, 5.5.3, and 7.2.6 shall be based on the recordkeeping requirements in Condition 7.2.9 and the formula listed below:

$$VOM = ((V_T \times P_g) / (R \times T)) \times MW_g \times (1 - CE) \times OT / 2000$$

Where:

VOM = VOM emission rate, T/yr

$V_T$  = Volumetric flow rate of exhaust gas, ft<sup>3</sup>/hr

$P_g$  = Estimated partial pressure of VOM in exhaust gas, psia

R = Ideal gas constant, 10.731 psia ft<sup>3</sup>/lb-mole °R

T = Temperature, °R

$MW_g$  = Estimated molecular weight of VOM in exhaust gas, lb/lb-mole

CE = Control efficiency of a given control device, fraction controlled

OT = Hours of operation for a given 12 month period, hr/yr

7.3 Units: Storage tanks engaged in off-site waste and recovery operations

Controls: Thermo Oxidizer and condenser

7.3.1 Description

Storage tanks used in the recycling and reclaiming of a variety of used chemicals and solvents, solvent mixtures, solid and semi-solid materials, aqueous chemicals, and other organic wastes.

7.3.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Tank Farms 4, 5, & 6	Storage Tanks	Condenser, C-18
Tank Farms 7, 8, & 9	Storage Tanks	None
Tank Farm 14	Storage Tanks	Thermo Oxidizer, C-22

Tank Farm 4: T-37 to T-51

Tank Farm 5: T-52 to T-54 and T-56 to T-61

Tank Farm 6: T-66 to T-80

Tank Farm 7: T-81, T-82, T-83 A and B, T-84 A and B, T-85 A and B, T-87, T-88, T-89 A and B, T-90 A and B, and T-91 A and B

Tank Farm 8: T-93 to T-97 and T-100 to T-103

Tank Farm 9: T-131 to T-136

Tank Farm 14: V-1 and V-2

7.3.3 Applicability Provisions and Applicable Regulations

- a. The "affected off-site waste and recovery storage tanks" for the purpose of these unit-specific conditions, are units subject to 40 CFR 63 Subpart DD "National Emission Standards for Off-site Waste and Recovery Operations". As of the "date issued" as shown on page 1 of this permit, the affected off-site waste and recovery storage tanks are identified in Condition 7.3.2.
- b. The affected off-site waste and recovery storage tanks are subject to 35 IAC 218 Subpart G.

7.3.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected off-site waste and recovery storage tanks not being subject to the control requirements of 40 CFR 60 Subpart Kb, because all of the storage tanks are either less than 75 m<sup>3</sup> (19,813 gal) capacity or less than 151 m<sup>3</sup> (39,890 gal) capacity storing a volatile organic

liquid with a maximum true vapor pressure less than 27.6 kPa (4.00 psia). [40 CFR 60.110b and 60.112b]

- b. This permit is issued based on the affected off-site waste and recovery storage tanks not being subject to 35 IAC 218 Subpart B, except for 35 IAC 218.129(f), because the storage tanks are less than 151 m<sup>3</sup> (40,000 gal) capacity. [35 IAC 218.119]
- c. This permit is issued based on the affected off-site waste and recovery storage tanks not being subject to 35 IAC 218 Subpart TT, because storage tanks are exempted from control requirements. [35 IAC 218.980(a)(2) and (b)(2)]
- d. This permit is issued based on the affected off-site waste and recovery storage tanks not being subject to the New Source Performance Standards (NSPS) for the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 60, Subparts VV, III, NNN, and RRR; the National Emission Standards For Hazardous Air Pollutants for the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 63, Subparts F, G, H, and I; or the Organic Material Emission Standards and Limitations for the Chicago Area, 35 IAC 218, Subparts Q and RR, because the affected off-site waste and recovery storage tanks are not associated with the manufacture of organic chemicals.
- e. This permit is issued based on the affected off-site waste and recovery storage tanks not being subject to the National Emission Standards For Hazardous Air Pollutants for benzene, 40 CFR 61, Subparts J, Y, BB, and FF, because affected off-site waste and recovery storage tanks are not operating in benzene service and the facility is not a benzene production facility, bulk terminal, chemical manufacturing plant, coke by-product recovery plant, or petroleum refinery.

#### 7.3.5 Control Requirements

- a. For a tank that is part of an existing affected source but the tank is not used to manage off-site material having a maximum organic vapor pressure that is equal to or greater than 76.6 kPa nor is the tank used for a waste stabilization process as defined in 40 CFR 63.681, the owner or operator shall use Tank Level 1 controls based on the off-site material maximum HAP vapor pressure and the tank's design capacity as follows: [40 CFR 63.685(b)(1)]
  - i. Design capacity less than 75 m<sup>3</sup> and maximum HAP vapor pressure less than 76.6 kPa, or

- ii. Design capacity equal to or greater than 75 m<sup>3</sup> and less than 151 m<sup>3</sup> and maximum HAP vapor pressure less than 27.6 kPa.
- b. Owners and operators controlling air emissions from a tank using Tank Level 1 controls shall meet the following requirements: [40 CFR 685(c)]
  - i. The tank shall be equipped with a fixed roof designed to meet the following specifications: [40 CFR 63.902(b)]
    - A. The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank. The fixed roof may be a separate cover installed on the tank (e.g., a removable cover mounted on an open-top tank) or may be an integral part of the tank structural design (e.g., a horizontal cylindrical tank equipped with a hatch).
    - B. The fixed roof shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.
    - C. Each opening in the fixed roof, and any manifold system associated with the fixed roof, shall be either:
      - 1. Equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device; or
      - 2. Connected by a closed-vent system that is vented to a control device. The control device shall remove or destroy organics in the vent stream, and shall be operating whenever regulated material is managed in the tank.

- D. The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the regulated-material to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: organic vapor permeability, the effects of any contact with the liquid or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.
- ii. Whenever a regulated-material is in the tank, the fixed roof shall be installed with each closure device secured in the closed position except as follows: [40 CFR 63.902(c)]
    - A. Opening of closure devices or removal of the fixed roof is allowed at the following times:
      - 1. To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.
      - 2. To remove accumulated sludge or other residues from the bottom of tank.
    - B. Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design

specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the owner or operator based on the tank manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the container internal pressure exceeds the internal pressure operating range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.

- C. Opening of a safety device, as defined in 40 CFR 63.901, is allowed at any time conditions require it to do so to avoid an unsafe condition.
- c. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission unit, except as provided in Conditions 7.3.5(c) (i), (ii), and (iii) and the following exception: If no odor nuisance exists the limitation of this condition shall apply only to photochemically reactive material. [35 IAC 218.301 and 218.302]
    - i. Flame, thermal or catalytic incineration so as either to reduce such emissions to 10 ppm equivalent methane (molecular weight 16) or less, or to convert 85 percent of the hydrocarbons to carbon dioxide and water; or,
    - ii. A vapor recovery system which adsorbs and/or condenses at least 85 percent of the total uncontrolled organic material that would otherwise be emitted to the atmosphere; or,
    - iii. Any other air pollution control equipment approved by the Illinois EPA and approved by the USEPA as a SIP revision capable of reducing by 85 percent or more the

uncontrolled organic material that would be otherwise emitted to the atmosphere.

- d. No person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 946 l (250 gal), unless such tank is equipped with a permanent submerged loading pipe or an equivalent device approved by the Illinois EPA according to the provisions of 35 IAC 201, and further processed consistent with 35 IAC 218.108, or unless such tank is a pressure tank as described in 35 IAC 218.121(a) or is fitted with a recovery system as described in 35 IAC 218.121(b)(2). Exception: If no odor nuisance exists the limitations of this Condition shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294°3K (70°F). [35 IAC 218.122(b) and (c)]

#### 7.3.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected off-site waste and recovery storage tanks are subject to the following:

The affected off-site waste and recovery storage tanks shall not exceed the following limits:

<u>Tank Farms</u>	<u>Throughput (1,000 gal/yr)</u>	<u>VOM Emissions (T/yr)</u>
4, 5, 6, 7, 8, 9, & 14	41,325	10.63

These limits are based on the maximum production rate of each piece of equipment.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1R].

The above limitations contain revisions to previously issued Permit 90070025. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or

modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the limits were grouped together. [T1R]

#### 7.3.7 Testing Requirements

- a. The owner or operator shall determine the maximum HAP vapor pressure for an off-site material to be managed in the tank using Tank Level 1 controls before the first time the off-site material is placed in the tank. The maximum HAP vapor pressure shall be determined using the procedures specified in Conditions 7.3.7(a)(i) through (iii). Thereafter, the owner or operator shall perform a new determination whenever changes to the off-site material managed in the tank could potentially cause the maximum HAP vapor pressure to increase to a level that is equal to or greater than the maximum HAP vapor pressure limit for the tank design capacity category specified in Table 3 or Table 4 of 40 CFR 63 Subpart DD, as applicable to the tank. [40 CFR 63.685(c)(1)]
  - i. The maximum HAP vapor pressure of the off-site material composition managed in a tank shall be determined using either direct measurement as specified in Condition 7.3.7(a)(ii) or by knowledge of the off-site material as specified by Condition 7.3.7(a)(iii). [40 CFR 63.694(j)(1)]
  - ii. Direct measurement to determine the maximum HAP vapor pressure of an off-site material. [40 CFR 63.694(j)(2)]
    - A. Sampling. A sufficient number of samples shall be collected to be representative of the off-site material contained in the tank. All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the off-site material is collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the plant site

operating records. An example of an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846 or Method 25D in 40 CFR part 60, appendix A.

B. Analysis. Any one of the following methods may be used to analyze the samples and compute the maximum HAP vapor pressure of the off-site material:

1. Method 25E in 40 CFR part 60 appendix A;
2. Methods described in American Petroleum Institute Bulletin 2517, "Evaporation Loss from External Floating Roof Tanks,";
3. Methods obtained from standard reference texts;
4. ASTM Method 2879-83; or
5. Any other method approved by the Administrator.

iii. Use of knowledge to determine the maximum HAP vapor pressure of the off-site material. Documentation shall be prepared and recorded that presents the information used as the basis for the owner's or operator's knowledge that the maximum HAP vapor pressure of the off-site material is less than the maximum vapor pressure limit listed in Table 3 or Table 4 of 40 CFR 63 Subpart DD for the applicable tank design capacity category. Examples of information that may be used include: the off-site material is generated by a process for which at other locations it previously has been determined by direct measurement that the off-site material maximum HAP vapor pressure is less than the maximum vapor pressure limit for the appropriate tank design capacity category. [40 CFR 63.694(j)(3)]

b. Procedure for determining no detectable organic emissions for the purpose of complying with this condition. [40 CFR 63.905(a)]

- i. The test shall be conducted in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the cover and associated closure devices shall be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: the interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.
- ii. The test shall be performed when the unit contains a material having a total organic concentration representative of the range of concentrations for the materials expected to be managed in the unit. During the test, the cover and closure devices shall be secured in the closed position.
- iii. The detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the organic constituents in the material placed in the unit, not for each individual organic constituent.
- iv. The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.
- v. Calibration gases shall be as follows:
  - A. Zero air (less than 10 ppmv hydrocarbon in air); and
  - B. A mixture of methane or n-hexane in air at a concentration of approximately, but less than 10,000 ppmv.
- vi. An owner or operator may choose to adjust or not adjust the detection instrument readings to account for the background organic concentration level. If an owner or operator chooses to adjust the instrument readings for the background level, the background level value must be determined according to the

procedures in Method 21 of 40 CFR part 60, appendix A.

- vii. Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (e.g., some pressure relief devices), the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.
  
- viii. An owner or operator must determine if a potential leak interface operates with no detectable emissions using the applicable procedure specified in Conditions 7.3.7(b) (viii) (A) or (B).
  - A. If an owner or operator chooses not to adjust the detection instrument readings for the background organic concentration level, then the maximum organic concentration value measured by the detection instrument is compared directly to the applicable value for the potential leak interface as specified in Condition 7.3.7(b) (ix).
  - B. If an owner or operator chooses to adjust the detection instrument readings for the background organic concentration level, the value of the arithmetic difference between the maximum organic concentration value measured by the instrument and the background organic concentration value as determined in Condition 7.3.7(b) (vi) is compared with the applicable value for the potential leak interface as specified in Condition 7.3.7(b) (ix).
  
- ix. A potential leak interface is determined to operate with no detectable emissions using the applicable criteria specified in Conditions 7.3.7(b) (ix) (A) and (B).
  - A. For a potential leak interface other than a seal around a shaft that passes through

- a cover opening, the potential leak interface is determined to operate with no detectable organic emissions if the organic concentration value determined in Condition 7.3.7(b) (viii) is less than 500 ppmv.
- B. For a seal around a shaft that passes through a cover opening, the potential leak interface is determined to operate with no detectable organic emissions if the organic concentration value determined in Condition 7.3.7(b) (viii) is less than 10,000 ppmv.
- c. Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below. [40 CFR 60.116b(e)]
- i. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.
- ii. For crude oil or refined petroleum products the vapor pressure may be obtained by the following:
- A. Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see 40 CFR 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).
- B. The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the

estimated maximum true vapor pressure is greater than 3.5 kPa.

- iii. For other liquids, the vapor pressure:
  - A. May be obtained from standard reference texts, or
  - B. Determined by ASTM Method D2879-83 (incorporated by reference—see 40 CFR 60.17).
- d. The owner or operator of each vessel with a design capacity greater than or equal to 75 m<sup>3</sup> (19,813 gal) storing a waste mixture of indeterminate or variable composition with a maximum true vapor pressure greater than or equal to 15.0 kPa (2.18 psia) shall be subject to the following requirements. [40 CFR 60.116b(f)]
  - i. Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in Condition 7.3.7(c).
  - ii. For vessels in which the vapor pressure of the anticipated liquid composition is greater than or equal to 15.0 kPa (2.18 psia) but below 27.6 kPa (4.00 psia), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:
    - A. ASTM Method D2879-83 (incorporated by reference—see 40 CFR 60.17); or
    - B. ASTM Method D323-82 (incorporated by reference—see 40 CFR 60.17)

#### 7.3.8 Inspection and Monitoring Requirements

- a. Owners and operators that use a tank equipped with a fixed roof in accordance with the provisions of Conditions 7.3.5(a) and (b) shall meet the following requirements: [40 CFR 63.906(a)]
  - i. The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the

tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

- ii. The owner or operator must perform an initial inspection following installation of the fixed roof. Thereafter, the owner or operator must perform the inspections at least once every calendar year except as provided for in Condition 7.3.8(d).
  - iii. In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of Condition 7.3.8(b).
  - iv. The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Condition 7.3.9(a).
- b. The owner or operator shall repair all detected defects as follows: [40 CFR 63.906(b)]
- i. The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in Condition 7.3.8(b)(ii).
  - ii. Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the regulated material normally managed in the tank. In this case, the owner or operator shall repair the defect the next time alternative tank capacity becomes available and the tank can be emptied or temporarily removed from service, as necessary to complete the repair.
- c. The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in Condition 7.3.9(b). [40 CFR 63.906(c)]
- d. Alternative inspection and monitoring interval. Following the initial inspection and monitoring of a fixed roof in accordance with this condition, subsequent inspection and monitoring of the equipment may be performed at intervals longer than 1 year when an owner or operator determines that performing the

required inspection or monitoring procedures would expose a worker to dangerous, hazardous, or otherwise unsafe conditions and the owner or operator complies with the requirements specified in Conditions 7.3.8(d) (i) and (ii). [40 CFR 63.906(d)]

- i. The owner or operator must prepare and maintain at the plant site written documentation identifying the specific air pollution control equipment designated as "unsafe to inspect and monitor." The documentation must include for each piece of air pollution control equipment designated as such a written explanation of the reasons why the equipment is unsafe to inspect or monitor using the applicable procedures under this section.
  - ii. The owner or operator must develop and implement a written plan and schedule to inspect and monitor the air pollution control equipment using the applicable procedures specified in this section during times when a worker can safely access the air pollution control equipment. The required inspections and monitoring must be performed as frequently as practicable but do not need to be performed more frequently than the periodic schedule that would be otherwise applicable to the air pollution control equipment under the provisions of this section. A copy of the written plan and schedule must be maintained at the plant site.
- e. The owner or operator shall inspect the spring-loaded pressure-vacuum relief valves, conservation vents, or similar types of pressure relief devices which vent to the atmosphere at least annually according to the procedures in Condition 7.3.7(b).

#### 7.3.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected off-site waste and recovery storage tanks to demonstrate compliance with Conditions 5.5.1 and 7.3.5, pursuant to Section 39.5(7) (b) of the Act:

- a. Each owner or operator shall prepare and maintain a record for each tank that includes the following information: [40 CFR 63.907(a)]

- i. A tank identification number (or other unique identification description as selected by the owner or operator).
  - ii. A description of the tank dimensions and the tank design capacity.
  - iii. The date that each inspection required by Condition 7.3.8 is performed.
- b. The owner or operator shall record the following information for each defect detected during inspections required by Condition 7.3.8: the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of 40 CFR 63.907(b)(2), the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected. [40 CFR 63.907(b)]
- c. The owner or operator of each storage vessel specified in Conditions 7.3.4(a) and (b) shall maintain readily accessible records of the dimension of the storage vessel and an analysis of the capacity of the storage vessel. These records shall be kept for the life of the source. [40 CFR 60.116b(b) and 35 IAC 218.129(f)]
- d. Except as provided in Condition 7.3.7(d), the owner or operator of each storage vessel with a design capacity greater than or equal to 75 m<sup>3</sup> (19,813 gal) but less than 151 m<sup>3</sup> (39,890 gal) storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa (2.18 psia) shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. [40 CFR 60.116b(c)]
- e. Throughput (gallons/year) and physical properties of typical material stored in each tank.
- f. VOM emissions for each tank (lbs/yr and T/yr)

#### 7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected off-site waste and recovery storage tanks with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

#### 7.3.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected off-site waste and recovery storage tanks without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

Changes in the material stored in a tank, provided that the emission limitations in Conditions 5.5.1 and 7.3.6 are not exceeded and the affected off-site waste and recovery storage tanks remain in compliance with this permit, 40 CFR 63 Subpart DD, 35 IAC 218 Subpart G, or any other applicable standard.

#### 7.3.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.3.9 and the emission factors and formulas listed below:

For the purpose of estimating VOM emissions from each affected tank, the current version of the TANKS program is acceptable.

7.4 Units: Storage tanks not engaged in off-site waste and recovery operations

Controls: Condensers

7.4.1 Description

Storage tanks used to store recycled and reclaimed chemicals and solvents, solvent mixtures, aqueous chemicals, and other organic materials.

7.4.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Tank Farms 1 & 2	Storage Tanks	Condenser, C-6
Tank Farm 3	Storage Tanks	Condenser, C-18
Tank Farm 13	Storage Tanks	None

Tank Farm 1: T-1 to T-10, T-12, T-13, and T-16

Tank Farm 2: T-17, T-19, T-21, T-23, T-25, T-27, T-28

Tank Farm 3: T-29 A and B, T-30, T-31, T-32 A and B, T-33 A and B, T-34 to T-36

Tank Farm 13: T-235 to T-239 and T-241 to T-245

7.4.3 Applicability Provisions and Applicable Regulations

The "affected storage tanks" for the purpose of these unit-specific conditions, are units subject to 35 IAC 218 Subpart G. As of the "date issued" as shown on page 1 of this permit, the affected storage tanks are identified in Condition 7.4.2.

7.4.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected storage tanks not being subject to 40 CFR 63 Subpart DD "National Emission Standards for Off-site Waste and Recovery Operations", because the affected storage tanks do not receive off-site materials as defined in 40 CFR 63.680(b).
- b. This permit is issued based on the affected storage tanks not being subject to 40 CFR 60 Subpart Kb, except for 40 CFR 60.116b(b), because all of the storage tanks are less than 75 m<sup>3</sup> (19,813 gal) capacity. [40 CFR 60.110b]
- c. This permit is issued based on the affected storage tanks not being subject to 35 IAC 218 Subpart B, except for 35 IAC 218.129(f), because the storage tanks are less than 151 m<sup>3</sup> (40,000 gal) capacity. [35 IAC 218.119]

- d. This permit is issued based on the affected storage tanks not being subject to 35 IAC 218 Subpart TT, because storage tanks are exempted from control requirements. [35 IAC 218.980(a)(2) and (b)(2)]
- e. This permit is issued based on the affected storage tanks not being subject to the New Source Performance Standards (NSPS) for the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 60, Subparts VV, III, NNN, and RRR; the National Emission Standards For Hazardous Air Pollutants for the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 63, Subparts F, G, H, and I; or the Organic Material Emission Standards and Limitations for the Chicago Area, 35 IAC 218, Subparts Q and RR, because the affected storage tanks are not associated with the manufacture of organic chemicals.
- f. This permit is issued based on the affected storage tanks not being subject to the National Emission Standards For Hazardous Air Pollutants for benzene, 40 CFR 61, Subparts J, Y, BB, and FF, because affected storage tanks are not operating in benzene service and the facility is not a benzene production facility, bulk terminal, chemical manufacturing plant, coke by-product recovery plant, or petroleum refinery.

#### 7.4.5 Control Requirements

- a. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission unit, except as provided in Conditions 7.4.5(a)(i), (ii), and (iii) and the following exception: If no odor nuisance exists the limitation of this condition shall apply only to photochemically reactive material. [35 IAC 218.301 and 218.302]
  - i. Flame, thermal or catalytic incineration so as either to reduce such emissions to 10 ppm equivalent methane (molecular weight 16) or less, or to convert 85 percent of the hydrocarbons to carbon dioxide and water; or,
  - ii. A vapor recovery system which adsorbs and/or condenses at least 85 percent of the total uncontrolled organic material that would otherwise be emitted to the atmosphere; or,
  - iii. Any other air pollution control equipment approved by the Illinois EPA and approved by the USEPA as a SIP revision capable of reducing by 85 percent or more the

uncontrolled organic material that would be otherwise emitted to the atmosphere.

- b. No person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 946 l (250 gal), unless such tank is equipped with a permanent submerged loading pipe or an equivalent device approved by the Illinois EPA according to the provisions of 35 IAC 201, and further processed consistent with 35 IAC 218.108, or unless such tank is a pressure tank as described in 35 IAC 218.121(a) or is fitted with a recovery system as described in 35 IAC 218.121(b)(2). Exception: If no odor nuisance exists the limitations of this Condition shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294°3K (70°F). [35 IAC 218.122(b) and (c)]

#### 7.4.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected storage tanks are subject to the following:

The affected storage tanks shall not exceed the following limits:

<u>Tank Farms</u>	<u>Throughput (1,000 gal/yr)</u>	<u>VOM Emissions (T/yr)</u>
1, 2, 3, & 13	28,315	3.73

These limits are based on the maximum production rate of each piece of equipment.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1R].

The above limitations contain revisions to previously issued Permit 90070025. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or

modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the limits were grouped together.  
[T1R]

7.4.7 Testing Requirements

None

7.4.8 Inspection and Monitoring Requirements

None

7.4.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected storage tank to demonstrate compliance with Conditions 5.5.1 and 7.4.4, pursuant to Section 39.5(7) (b) of the Act:

- a. The owner or operator of each storage vessel specified in Conditions 7.4.4(b) and (c) shall maintain readily accessible records of the dimension of the storage vessel and an analysis of the capacity of the storage vessel. These records shall be kept for the life of the source. [40 CFR 60.116b(b) and 35 IAC 218.129(f)]
- b. Throughput (gallons/year) and physical properties of typical material stored in each tank.
- c. VOM emissions of each tank (lbs/yr and T/yr).

7.4.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected storage tanks with the permit requirements as follows, pursuant to Section 39.5(7) (f) (ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected storage tanks without prior notification to the Illinois EPA or revision of this permit. This condition does not affect

the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

Changes in the material stored in a tank, provided that the emission limitations in Conditions 5.5.1 and 7.4.6 are not exceeded and the affected storage tanks remain in compliance with this permit, 35 IAC 218 Subpart G, or any other applicable standard.

#### 7.4.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.4.9 and the emission factors and formulas listed below:

For the purpose of estimating VOM emissions from each affected tank, the current version of the TANKS program is acceptable.

7.5 Units: Natural Gas Fired Boilers

7.5.1 Description

Boilers used to generate plant steam. The steam is used for heating water, freeze protection, comfort control, and in process equipment such as evaporators and distillation units.

7.5.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Boiler #1, B-1	16.72 MBtu/hr	None
Boiler #2, B-2	13.38 MBtu/hr	None

7.5.3 Applicability Provisions and Applicable Regulations

- a. An affected boiler for the purpose of these unit specific conditions is a steam generating unit that is fired with natural gas, with a maximum heat input capacity of 100 MBtu/hr or less, but greater than or equal to 10 MBtu/hr. Boiler #1 is subject to the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60 Subpart Dc because the boiler was constructed after June 9, 1989 and the firing rate of the boiler is less than 100 MBtu/hr and greater than 10 MBtu/hr. Boiler #2 is not subject to 40 CFR 60 Subpart Dc because the boiler was constructed before June 9, 1989. As of the "date issued" as shown page 1 of this permit, the affected boilers are identified in Condition 7.5.2.
- b. No person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission unit with actual heat input greater than 2.9 MW (10 MBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air [35 IAC 216.121].
- c. The affected boilers are subject to the emission limits identified in condition 5.2.2.

7.5.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected boilers not being subject to 35 IAC 217.141, because the actual heat input of each affected boiler is less than 73.2 MW (250 MBtu/hr).
- b. This permit is issued based on the affected boilers not being subject to 40 CFR 60 Subparts D or Db, because the boilers each have maximum heat input capacities of less than 100 MBtu/hr.

- c. This permit is issued based on the affected boilers not being subject to 35 IAC 218 Subpart G, because fuel combustion emission units are exempt pursuant to 35 IAC 218.303.
- d. This permit is issued based on the affected boilers not being subject to 35 IAC 218 Subpart TT, because fuel combustion emission units are exempted from control requirements pursuant to 35 IAC 218.980(f).

7.5.5 Operational and Production Limits and Work Practices

Natural gas shall be the only fuel burned in the boilers.

7.5.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected boilers are subject to the following:

- a. Emissions from Boiler #1 shall not exceed the following limits:

<u>Pollutant</u>	<u>Emissions (Ton/Year)</u>
NO <sub>x</sub>	7.31
CO	6.14
PM	0.14
VOM	0.40
SO <sub>2</sub>	0.05

These limits are based on the maximum production rate of each piece of equipment.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1R].

The above limitations contain revisions to previously issued Permit 92080095. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not

constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the limits are changed to better reflect actual maximum emissions and to correlate with the most recent emission factors. [T1R]

- b. Emissions from Boiler #2 shall not exceed the following limits:

<u>Pollutant</u>	<u>Emissions (Ton/Year)</u>
NO <sub>x</sub>	5.87
CO	4.93
PM	0.11
VOM	0.32
SO <sub>2</sub>	0.04

These limits are based on the maximum production rate of each piece of equipment.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1R].

The above limitations contain revisions to previously issued Permit 88050073. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, the limits are changed to better reflect actual maximum emissions and to correlate with the most recent emission factors. [T1R]

#### 7.5.7 Testing Requirements

None

7.5.8 Inspection and Monitoring Requirements

None

7.5.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected boiler to demonstrate compliance with Conditions 5.5.1 and 7.5.4, pursuant to Section 39.5(7)(b) of the Act:

- a. Total natural gas usage for each boiler (MBtu/year) [40 CFR 60.48c(g)]
- b. Annual aggregate NO<sub>x</sub>, CO, PM, VOM, and SO<sub>2</sub> emissions from each affected boiler, based on fuel consumption and the applicable emission factors, with supporting calculations.

7.5.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected storage tanks with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken

7.5.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.5.12 Compliance Procedures

- a. Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.5.9 and the emission factors and formulas listed below:

Emissions from the affected boilers burning natural gas shall be calculated based on the following emission factors:

<u>Pollutant</u>	<u>Emission Factor</u> <u>(lb/10<sup>6</sup> ft<sup>3</sup>)</u>
NO <sub>x</sub>	100
CO	84
PM	1.9
VOM	5.5
SO <sub>2</sub>	0.6

These are the emission factors for uncontrolled natural gas combustion in small boilers (<100 MBtu/hr), Tables 1.4-1 and 1.4-2, AP-42, Volume I, Fifth Edition, March 1998.

Boiler Emissions (ton) = natural gas consumed multiplied by the appropriate emission factor/2000.

- b. Compliance provisions addressing Condition 7.5.3 (b) is not set by this permit as compliance is assumed to be achieved by proper operating conditions of the affected boiler.

7.6 Units: Leaking Equipment Fugitives

7.6.1 Description

Pumps, valves, open-end lines, connectors/flanges, and relief valves used to recycle and reclaim a variety of used chemicals and solvents, solvent mixtures, solid and semi-solid materials, aqueous chemicals, and other organic wastes.

7.6.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Pumps, Valves, Open-End Lines, Connectors/Flanges, and Relief Valves	Fugitive VOM Emissions	None

7.6.3 Applicability Provisions and Applicable Regulations

- a. The "affected leaking equipment" for the purpose of these unit-specific conditions, are units subject to 40 CFR 63 Subpart DD "National Emission Standards for Off-site Waste and Recovery Operations". For the purposes of this permit all leaking equipment at the site, regardless of whether they are engaged in off-site waste and recovery operations or not, will be subject to 40 CFR 63 Subpart DD. As of the "date issued" as shown on page 1 of this permit, the affected off-site waste and recovery operations are identified in Condition 7.6.2.
- b. The affected leaking equipment are subject to 35 IAC 218 Subparts C and TT.
- c. The affected leaking equipment are subject to 40 CFR 63 Subpart DD. To streamline the applicable requirements for the source, the Illinois EPA finds that compliance with 40 CFR 63, Subpart DD assures compliance with 35 IAC 218 Subparts C and TT.

7.6.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected leaking equipment not being subject to the New Source Performance Standards (NSPS) for the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 60, Subparts VV, III, NNN, and RRR; the National Emission Standards For Hazardous Air Pollutants for the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 63, Subparts F, G, H, and I; or the Organic Material Emission Standards and Limitations for the Chicago Area, 35 IAC 218, Subparts Q and RR, because

the affected leaking equipment are not associated with the manufacture of organic chemicals.

- b. This permit is issued based on the affected leaking equipment not being subject to the National Emission Standards For Hazardous Air Pollutants for benzene, 40 CFR 61, Subparts J, Y, BB, and FF, because affected leaking equipment are not operating in benzene service and the facility is not a benzene production facility, bulk terminal, chemical manufacturing plant, coke by-product recovery plant, or petroleum refinery.

#### 7.6.5 Control Requirements/Work Practices

- a. The owner or operator shall control the HAP emitted from equipment leaks in accordance with the applicable provisions specified in Conditions 7.6.5(b) through (l). [40 CFR 63.691(b)(1)]
- b. Each piece of equipment to which this condition applies shall be marked in such a manner that it can be distinguished readily from other pieces of equipment. [40 CFR 61.242-1(d)]
- c. Equipment that is in vacuum service is excluded from the requirements of Conditions 7.6.5(d) through (l) if it is identified as required in Condition 7.6.9(e)(v). [40 CFR 61.242-1(e)]
- d. Standards: Pumps. [40 CFR 61.242-2]
  - i. A. Each pump shall be monitored monthly to detect leaks by the methods specified in Condition 7.6.7(a), except as provided in Conditions 7.6.5(d)(iv), (v), and (vi).  
B. Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.
  - ii. A. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.  
B. If there are indications of liquids dripping from the pump seal, a leak is detected.
  - iii. A. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition 7.6.5(k).

- B. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
- iv. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of Conditions 7.6.5(d) (i) and (ii), provided the following requirements are met:
- A. Each dual mechanical seal system is:
    - 1. Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or
    - 2. Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of Condition 7.6.5(1); or
    - 3. Equipped with a system that purges the barrier fluid into a process stream with zero VHAP emissions to atmosphere.
  - B. The barrier fluid is not in VHAP service and, if the pump is covered by standards under 40 CFR part 60, is not in VOC service.
  - C. Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.
  - D. Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.
    - 1. If there are indications of liquid dripping from the pump seal at the time of the weekly inspection, the pump shall be monitored as specified in Condition 7.6.7 to determine the presence of VOC and VHAP in the barrier fluid.
    - 2. If the monitor reading (taking into account any background readings)

indicates the presence of VHAP, a leak is detected. For the purpose of this paragraph, the monitor may be calibrated with VHAP, or may employ a gas chromatography column to limit the response of the monitor to VHAP, at the option of the owner or operator.

3. If an instrument reading of 10,000 ppm or greater (total VOC) is measured, a leak is detected.
- E. Each sensor as described in Condition 7.6.5(d) (iv) (C) is checked daily or is equipped with an audible alarm.
- F. 1. The owner or operator determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both.
2. If indications of liquids dripping from the pump seal exceed the criteria established in Condition 7.6.5(d) (iv) (F) (1), or if, based on the criteria established in Condition 7.6.5(d) (iv) (F) (1), the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.
  3. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in Condition 7.6.5(k).
  4. A first attempt at repair shall be made no later than five calendar days after each leak is detected.
- v. Any pump that is designated, as described in Condition 7.6.9(e) (ii), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Conditions 7.6.5(d) (i), (iii), and (iv) if the pump:

- A. Has no externally actuated shaft penetrating the pump housing,
  - B. Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Condition 7.6.7(b), and
  - C. Is tested for compliance with Condition 7.6.5(d) (v) (B) initially upon designation, annually, and at other times requested by the Administrator.
- vi. If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of Condition 7.6.5(l), it is exempt from the requirements of Conditions 7.6.5(d) (i) through (v).
  - vii. Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of Conditions 7.6.5(d) (i) (B) and (iv) (D), and the daily requirements of Condition 7.6.5(d) (iv) (F) (1), provided that each pump is visually inspected as often as practicable and at least monthly.
- e. Standards: Pressure relief devices in gas/vapor service. [40 CFR 61.242-4]
    - i. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Condition 7.6.7(b).
    - ii. A. After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in Condition 7.6.5(k).
    - B. No later than 5 calendar days after the pressure release, the pressure relief

device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Condition 7.6.7(b).

- iii. Any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in Condition 7.6.5(l) is exempt from the requirements of Conditions 7.6.5(e) (i) and (ii).
- f. Standards: Sampling connecting systems. [40 CFR 61.242-5]
- i. Each sampling connection system shall be equipped with a closed-purge system or closed vent system.
  - ii. Each closed-purge system or closed-vent system as required in Condition 7.6.5(f) (i) shall:
    - A. Return the purged process fluid directly to the process line with zero VHAP emissions to atmosphere; or
    - B. Collect and recycle the purged process fluid with zero VHAP emissions to atmosphere; or
    - C. Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of Condition 7.6.5(l).
  - iii. In-situ sampling systems are exempt from the requirements of Conditions 7.6.5(f) (i) and (ii).
- g. Standards: Open-ended valves or lines. [40 CFR 61.242-6]
- i. A. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve.
  - B. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

- ii. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.
  - iii. When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with Condition 7.6.5(g) (i).
- h. Standards: Valves. [40 CFR 61.242-7]
- i. Each valve shall be monitored monthly to detect leaks by the method specified in Condition 7.6.7(a) and shall comply with Conditions 7.6.5(h) (ii) through (v), except as provided in Conditions 7.6.5(h) (vi), (vii), and (viii).
  - ii. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
  - iii.
    - A. Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.
    - B. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.
  - iv.
    - A. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in Condition 7.6.5(k).
    - B. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
  - v. First attempts at repair include, but are not limited to, the following best practices where practicable:
    - A. Tightening of bonnet bolts;
    - B. Replacement of bonnet bolts;
    - C. Tightening of packing gland nuts; and

- D. Injection of lubricant into lubricated packing.
- vi. Any valve that is designated, as described in Condition 7.6.9(e) (ii), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Condition 7.6.5(h) (i) if the valve:
    - A. Has no external actuating mechanism in contact with the process fluid;
    - B. Is operated with emissions less than 500 ppm above background, as measured by the method specified in Condition 7.6.7(b); and
    - C. Is tested for compliance with Condition 7.6.5(h) (vi) (B) initially upon designation, annually, and at other times requested by the Administrator.
  - vii. Any valve that is designated, as described in Condition 7.6.9(f) (i), as an unsafe-to-monitor valve is exempt from the requirements of Condition 7.6.5(h) (i) if:
    - A. The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Condition 7.6.5(h) (i); and
    - B. The owner or operator of the valve has a written plan that requires monitoring of the valve as frequent as practicable during safe-to-monitor times.
  - viii. Any valve that is designated, as described in Condition 7.6.9(f) (ii), as a difficult-to-monitor valve is exempt from the requirements of Condition 7.6.5(h) (i) if:
    - A. The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface;
    - B. The process unit within which the valve is located is an existing process unit; and

- C. The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.
- i. Standards: Pressure relief devices in liquid service and flanges and other connectors. [40 CFR 61.242-8]
  - i. Pressure relief devices in liquid service and flanges and other connectors shall be monitored within 5 days by the method specified in Condition 7.6.7(a) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.
  - ii. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
  - iii. A. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition 7.6.5(k).  
B. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
  - iv. First attempts at repair include, but are not limited to, the best practices described under Condition 7.6.5(h) (v).
- j. Standards: Product accumulator vessels. [40 CFR 61.242-9]

Each product accumulator vessel subject to 40 CFR Subpart DD shall be equipped with a closed-vent system capable of capturing and transporting any leakage from the vessel to a control device as described in Condition 7.6.5(l).
- k. Standards: Delay of repair. [40 CFR 61.242-10]
  - i. Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.
  - ii. Delay of repair of equipment for which leaks have been detected will be allowed for

equipment that is isolated from the process and that does not remain in VHAP service.

- iii. Delay of repair for valves will be allowed if:
    - A. The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and
    - B. When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with Condition 7.6.5(1).
  - iv. Delay of repair for pumps will be allowed if:
    - A. Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and
    - B. Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.
  - v. Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.
1. Standards: Closed-vent systems and control devices.  
[40 CFR 61.242-11]
- i. Owners or operators of closed-vent systems and control devices used to comply with provisions of this condition shall comply with the provisions of this condition.
  - ii. Vapor recovery systems (for example, condensers and adsorbers) shall be designed and operated to recover the organic vapors vented to them with an efficiency of 95 percent or greater.
  - iii. Enclosed combustion devices shall be designed and operated to reduce the VHAP emissions

vented to them with an efficiency of 95 percent or greater or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760°C.

- iv. Flares used to comply with this condition shall comply with the requirements of 40 CFR 60.18.
- v. Owners or operators of control devices that are used to comply with the provisions of this condition shall monitor these control devices to ensure that they are operated and maintained in conformance with their design.
- vi.
  - A. Closed-vent systems shall be designed for and operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background and by visual inspections, as determined by the methods specified in Condition 7.6.7(b).
  - B. Closed-vent systems shall be monitored to determine compliance with this section initially in accordance with Condition 7.6.7(b), annually (visual inspection), and at other times requested by the administrator.
  - C. Leaks, as indicated by an instrument reading greater than 500 ppm and visual inspections, shall be repaired as soon as practicable, but not later than 15 calendar days after the leak is detected.
  - D. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.
- vii. Closed-vent systems and control devices use to comply with provisions of this condition shall be operated at all times when emissions may be vented to them.

#### 7.6.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected leaking equipment are subject to the following:

None

7.6.7 Testing Requirements

- a. Monitoring, as required in Condition 7.6.5, shall comply with the following requirements: [40 CFR 61.245(b)]
  - i. Monitoring shall comply with Method 21 of Appendix A of 40 CFR part 60.
  - ii. The detection instrument shall meet the performance criteria of Reference Method 21.
  - iii. The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.
  - iv. Calibration gases shall be:
    - A. Zero air (less than 10 ppm of hydrocarbon in air); and
    - B. A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.
  - v. The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.
- b. When equipment is tested for compliance with or monitored for no detectable emissions, the owner or operator shall comply with the following requirements: [40 CFR 61.245(c)]
  - i. The requirements of Conditions 7.6.7(a) (i) through (iv) shall apply.
  - ii. The background level shall be determined, as set forth in Reference Method 21.
  - iii. The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.
  - iv. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.
- c. i. Each piece of equipment within a process unit that can conceivably contain equipment in VHAP

service is presumed to be in VHAP service unless an owner or operator demonstrates that the piece of equipment is not in VHAP service. For a piece of equipment to be considered not in VHAP service, it must be determined that the percent VHAP content can be reasonably expected never to exceed 10 percent by weight. For purposes of determining the percent VHAP content of the process fluid that is contained in or contacts equipment, procedures that conform to the methods described in ASTM Method D-2267 (incorporated by the reference as specified in 40 CFR 61.18) shall be used. [40 CFR 61.245(d)]

- ii. A. An owner or operator may use engineering judgment rather than the procedures in Condition 7.6.7(c) (i) to demonstrate that the percent VHAP content does not exceed 10 percent by weight, provided that the engineering judgment demonstrates that the VHAP content clearly does not exceed 10 percent by weight. When an owner or operator and the Administrator do not agree on whether a piece of equipment is not in VHAP service, however, the procedures in Condition 7.6.7(c) (i) shall be used to resolve the disagreement.
  - B. If an owner or operator determines that a piece of equipment is in VHAP service, the determination can be revised only after following the procedures in Condition 7.6.7(c) (i).
  - iii. Samples used in determining the percent VHAP content shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.
- d. i. Method 22 of Appendix A of 40 CFR part 60 shall be used to determine compliance of flares with the visible emission provisions of this condition. [40 CFR 61.245(e)]
- ii. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
  - iii. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \left( \sum_{i=1}^n C_i H_i \right)$$

Where:

$H_T$  = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25°C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20°C.

$K$  = Constant,  $1.74 \times 10^{-7}$  (1/ppm) (g mole/scm) (MJ/kcal) where standard temperature for (g mole/scm) is 20°C.

$C_i$  = Concentration of sample component  $i$  in ppm, as measured by Reference Method 18 of Appendix A of 40 CFR part 60 and ASTM D2504-67 (reapproved 1977) (incorporated by reference as specified in 40 CFR 61.18).

$H_i$  = Net heat of combustion of sample component  $i$ , kcal/g mole. The heats of combustion may be determined using ASTM D2382-76 (incorporated by reference as specified in 40 CFR 61.18) if published values are not available or cannot be calculated.

- iv. The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Reference Method 2, 2A, 2C, or 2D, as appropriate, by the unobstructed (free) cross section area of the flare tip.
- v. The maximum permitted velocity,  $V_{Max}$  for air-assisted flares shall be determined by the following equation:

$$V_{Max} = 8.76 + 0.7084(H_T)$$

Where:

$V_{Max}$  = Maximum permitted velocity, m/sec.  
 8.706 = Constant.  
 0.7084 = Constant.  
 $H_T$  = The net heating value as determined in Condition 7.6.7(d) (iii).

7.6.8 Inspection and Monitoring Requirements

See Condition 7.6.5

7.6.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected leaking equipment to demonstrate compliance with Conditions 5.5.1 and 7.6.5, pursuant to Section 39.5(7)(b) of the Act:

- a. An owner or operator of more than one process unit subject to the provisions of this permit may comply with the recordkeeping requirements for these process units in one recordkeeping system if the system identifies each record by each process unit. [40 CFR 61.246(a)(2)]
- b. When each leak is detected as specified in Condition 7.6.5, the following requirements apply: [40 CFR 61.246(b)]
  - i. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.
  - ii. The identification on a valve may be removed after it has been monitored for 2 successive months as specified in Condition 7.6.5(h)(iii) and no leak has been detected during those 2 months.
  - iii. The identification on equipment, except on a valve, may be removed after it has been repaired.
- c. When each leak is detected as specified in Condition 7.6.5, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location: [40 CFR 61.246(c)]
  - i. The instrument and operator identification numbers and the equipment identification number.
  - ii. The date the leak was detected and the dates of each attempt to repair the leak.
  - iii. Repair methods applied in each attempt to repair the leak.

- iv. "Above 10,000" if the maximum instrument reading measured by the methods specified in Condition 7.6.7 after each repair attempt is equal to or greater than 10,000 ppm.
  - v. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
  - vi. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
  - vii. The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days unrepaired.
  - viii. Dates of process unit shutdowns that occur while the equipment is unrepaired.
  - ix. The date of successful repair of the leak.
- d. The following information pertaining to the design requirements for closed-vent systems and control devices described in Condition 7.6.5(1) shall be recorded and kept in a readily accessible location: [40 CFR 61.246(d)]
- i. Detailed schematics, design specifications, and piping and instrumentation diagrams.
  - ii. The dates and descriptions of any changes in the design specifications.
  - iii. A description of the parameter or parameters monitored, as required in Condition 7.6.5(1)(v), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.
  - iv. Periods when the closed-vent systems and control devices required in Condition 7.6.5 are not operated as designed, including periods when a flare pilot light does not have a flame.
  - v. Dates of startups and shutdowns of the closed-vent systems and control devices required in Condition 7.6.5.

- e. The following information pertaining to all equipment to which a standard applies shall be recorded in a log that is kept in a readily accessible location: [40 CFR 61.246(e)]
  - i. A list of identification numbers for equipment (except welded fittings) subject to the requirements of this subpart.
  - ii. A. A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background.  
B. The designation of this equipment for no detectable emissions shall be signed by the owner or operator.
  - iii. A list of equipment identification numbers for pressure relief devices required to comply with Condition 7.6.5(e) (i).
  - iv. A. The dates of each compliance test required in Condition 7.6.5.  
B. The background level measured during each compliance test.  
C. The maximum instrument reading measured at the equipment during each compliance test.
  - v. A list of identification numbers for equipment in vacuum service.
- f. The following information pertaining to all valves subject to the requirements of Conditions 7.6.5(h) (vii) and (viii) shall be recorded in a log that is kept in a readily accessible location: [40 CFR 61.246(f)]
  - i. A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve.
  - ii. A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.

- g. The following information shall be recorded in a log that is kept in a readily accessible location: [40 CFR 61.246(h)]
  - i. Design criterion required in Conditions 7.6.5(d) (iv) (E) and (e) (v) (B) and an explanation of the design criterion; and
  - ii. Any changes to this criterion and the reasons for the changes.
- h. The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in the applicability section of 40 CFR 61 Subpart V and other specific subparts: [40 CFR 61.246(i)]
  - i. An analysis demonstrating the design capacity of the process unit, and
  - ii. An analysis demonstrating that equipment is not in VHAP service.
- i. Information and data used to demonstrate that a piece of equipment is not in VHAP service shall be recorded in a log that is kept in a readily accessible location. [40 CFR 61.246(j)]
- j. Number of each component in service and hours of service (hr/month and hr/yr).

#### 7.6.10 Reporting Requirements

- a. The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected leaking equipment with the permit requirements as follows, pursuant to Section 39.5(7) (f) (ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken
- b.
  - i. An owner or operator of any piece of equipment to which this condition applies shall submit a statement in writing notifying the Administrator that the requirements of Conditions 7.6.5, 7.6.7, 7.6.9, and 7.6.10 are being implemented. [40 CFR 61.247(a)]
  - ii. In the case of an existing source or a new source which has an initial startup date preceding the effective date, the statement is to be submitted within 90 days of the effective date, unless a waiver of compliance

is granted under 40 CFR 61.11, along with the information required under 40 CFR 61.10. If a waiver of compliance is granted, the statement is to be submitted on a date scheduled by the Administrator.

- iii. In the case of new sources which did not have an initial startup date preceding the effective date, the statement shall be submitted with the application for approval of construction, as described in 40 CFR 61.07.
- iv. The statement is to contain the following information for each source:
  - A. Equipment identification number and process unit identification.
  - B. Type of equipment (for example, a pump or pipeline valve).
  - C. Percent by weight VHAP in the fluid at the equipment.
  - D. Process fluid state at the equipment (gas/vapor or liquid).
  - E. Method of compliance with the standard (for example, "monthly leak detection and repair" or "equipped with dual mechanical seals").
- c. A report shall be submitted to the Administrator semiannually starting 6 months after the initial report required in Condition 7.6.10(b), that includes the following information: [40 CFR 61.247(b)]
  - i. Process unit identification.
  - ii. For each month during the semiannual reporting period,
    - A. Number of valves for which leaks were detected as described in Condition 7.6.5(h)(ii).
    - B. Number of valves for which leaks were not repaired as required in Condition 7.6.5(h)(iv).
    - C. Number of pumps for which leaks were detected as described in Conditions 7.6.5(d)(ii) and (iv)(F).

- D. Number of pumps for which leaks were not repaired as required in Conditions 7.6.5(d) (iii) and (iv) (G).
  - E. The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible.
- iii. Dates of process unit shutdowns which occurred within the semiannual reporting period.
  - iv. Revisions to items reported according to Condition 7.6.10(b) if changes have occurred since the initial report or subsequent revisions to the initial report.
- "Note: Compliance with the requirements of 40 CFR 61.10(c) is not required for revisions documented under this paragraph."
- v. The results of all performance tests and monitoring to determine compliance with no detectable emissions conducted within the semiannual reporting period.
- d. In the first report submitted as required in Condition 7.6.10(b), the report shall include a reporting schedule stating the months that semiannual reports shall be submitted. Subsequent reports shall be submitted according to that schedule, unless a revised schedule has been submitted in a previous semiannual report. [40 CFR 61.247(c)]
  - e. An application for approval of construction or modification, 40 CFR 61.05(a) and 61.07, will not be required if: [40 CFR 61.247(e)]
    - i. The new source complies with the standard, Condition 7.6.5;
    - ii. The new source is not part of the construction of a process unit; and
    - iii. In the next semiannual report required by Condition 7.6.10(c), the information in Condition 7.6.10(b) (iv) is reported.
  - f. VOM emissions (T/mo and T/yr)

#### 7.6.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected leaking

equipment without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

Changes in the material processed or the number of affected components, provided that the source wide emission limitations in Condition 5.5.1 are not exceeded and the affected leaking equipment remain in compliance with this permit, 40 CFR 63 Subpart DD, or any other applicable standard.

7.6.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.6.9 and the emission factors and formulas listed below:

VOM emissions from the affected leaking equipment shall be calculated based on the following emission factors and control efficiencies:

<u>Component</u>	<u>VOM Emission Factor (lb/hr/component)</u>	<u>Control Efficiency (%)</u>
Pumps	0.0439	93
Valves	0.0089	97
Open-End Lines	0.0038	97
Connectors/Flanges	0.0005	30
Relief Valves	0.2293	97

These are the emission factors for uncontrolled fugitive equipment in SOCFI light liquid service, EPA Document, EPA-453/R-93-026, June 1993, Page 2-10 and control efficiencies for Texas Natural Resources Conservation Commission Leak Detection and Repair Programs, 28MID, Technical Guidance Package for Chemical Sources, Equipment Leak Fugitives, March 1995.

VOM Emissions (ton) = Number of Components x The Appropriate Emission Factor x (1 - Appropriate Control Efficiency) x Hours Of Service/2000.

## 8.0 GENERAL PERMIT CONDITIONS

### 8.1 Permit Shield

Pursuant to Section 39.5(7)(j) of the Act, the Permittee has requested and has been granted a permit shield. This permit shield provides that compliance with the conditions of this permit shall be deemed compliance with applicable requirements which were applicable as of the date the proposed permit for this source was issued, provided that either the applicable requirements are specifically identified within this permit, or the Illinois EPA, in acting on this permit application, has determined that other requirements specifically identified are not applicable to this source and this determination (or a concise summary thereof) is included in this permit.

This permit shield does not extend to applicable requirements which are promulgated after January 13, 2000 (the date of issuance of the draft permit) unless this permit has been modified to reflect such new requirements.

### 8.2 Applicability of Title IV Requirements (Acid Deposition Control)

This source is not an affected source under Title IV of the CAA and is not subject to requirements pursuant to Title IV of the CAA.

### 8.3 Emissions Trading Programs

No permit revision shall be required for increases in emissions allowed under any USEPA approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for elsewhere in this permit and that are authorized by the applicable requirement [Section 39.5(7)(o)(vii) of the Act].

### 8.4 Operational Flexibility/Anticipated Operating Scenarios

#### 8.4.1 Changes Specifically Addressed by Permit

Physical or operational changes specifically addressed by the Conditions of this permit that have been identified as not requiring Illinois EPA notification may be implemented without prior notice to the Illinois EPA.

#### 8.4.2 Changes Requiring Prior Notification

The Permittee is authorized to make physical or operational changes without applying for or obtaining an amendment to this permit, provided that the changes do not constitute a modification under Title I of the CAA, emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change, and the Permittee provides written

notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change [Section 39.5(12)(a) of the Act]. This notice shall:

- a. Describe the physical or operational change;
- b. Identify the schedule for implementing the physical or operational change;
- c. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;
- d. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and
- e. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

#### 8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Condition 8.6.

#### 8.6 Reporting Requirements

##### 8.6.1 Monitoring Reports

A report summarizing required monitoring as specified in the conditions of this permit shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7)(f) of the Act]:

<u>Monitoring Period</u>	<u>Report Due Date</u>
January - June	September 1
July - December	March 1

All instances of deviations from permit requirements must be clearly identified in such reports. All such reports shall be certified in accordance with Condition 9.9.

#### 8.6.2 Test Notifications

Unless otherwise specified elsewhere in this permit, a written test plan for any test required by this permit shall be submitted to the Illinois EPA for review at least 60 days prior to the testing pursuant to Section 39.5(7)(a) of the Act. The notification shall include at a minimum:

- a. The name and identification of the affected unit(s);
- b. The person(s) who will be performing sampling and analysis and their experience with similar tests;
- c. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined;
- d. The specific determination of emissions and operation which are intended to be made, including sampling and monitoring locations;
- e. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods;
- f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and
- g. Any proposed use of an alternative test method, with detailed justification.

#### 8.6.3 Test Reports

Unless otherwise specified elsewhere in this permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The test report shall include at a minimum [Section 39.5(7)(e)(i) of the Act]:

- a. The name and identification of the affected unit(s);
- b. The date and time of the sampling or measurements;
- c. The date any analyses were performed;
- d. The name of the company that performed the tests and/or analyses;

- e. The test and analytical methodologies used;
- f. The results of the tests including raw data, and/or analyses including sample calculations;
- g. The operating conditions at the time of the sampling or measurements; and
- h. The name of any relevant observers present including the testing company's representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

#### 8.6.4 Reporting Addresses

- a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:

- i. Illinois EPA - Air Compliance Section

Illinois Environmental Protection Agency (MC 40)  
Bureau of Air  
Compliance Section  
P.O. Box 19276  
Springfield, Illinois 62794-9276

- ii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
9511 West Harrison  
Des Plaines, Illinois 60016

- iii. Illinois EPA - Air Permit Section (MC 11)

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Permit Section  
P.O. Box 19506  
Springfield, Illinois 62794-9506

- iv. USEPA Region 5 - Air Branch

USEPA (AE - 17J)  
Air & Radiation Division  
77 West Jackson Boulevard  
Chicago, Illinois 60604

- b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

#### 8.7 Obligation to Comply with Title I Requirements

Notwithstanding the expiration date listed on the first page of this permit, the Permittee's obligation to comply with the Title I requirements, identified in this permit by T1, T1R, and T1N, and associated compliance procedures remains in effect in accordance with 35 IAC Part 203 or 40 CFR 52.21.

## 9.0 STANDARD PERMIT CONDITIONS

### 9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in this permit and as allowed by law and rule [Section 39.5(7)(j)(iv) of the Act].

9.1.2 In particular, this permit does not alter or affect the following:

- a. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority under that Section;
- b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
- c. The applicable requirements of the acid rain program consistent with Section 408(a) of the CAA; and
- d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the CAA.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

### 9.2 General Obligations of Permittee

#### 9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the CAA and the Act, and is grounds for any or all of the following: enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application [Section 39.5(7)(o)(i) of the Act].

The Permittee shall meet applicable requirements that become effective during the permit term in a timely manner unless an alternate schedule for compliance with the applicable requirement is established.

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless such malfunction or breakdown is allowed by a permit condition [Section 39.5(6)(c) of the Act].

9.2.4 Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Act or regulations promulgated thereunder.

9.2.5 Duty to Pay Fees

The Permittee must pay fees to the Illinois EPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto [Section 39.5(7)(o)(vi) of the Act]. The check should be payable to "Treasurer, State of Illinois" and sent to: Fiscal Services Section, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, Illinois 62794-9276.

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(p)(ii) of the Act]:

- a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect during hours of operation any sources, equipment (including monitoring and air pollution control

equipment), practices, or operations regulated or required under this permit;

- d. Sample or monitor any substances or parameters at any location:
  - i. At reasonable times, for the purposes of assuring permit compliance; or
  - ii. As otherwise authorized by the CAA, or the Act.
- e. Obtain and remove samples of any discharge or emission of pollutants; and
- f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source.

#### 9.4 Obligation to Comply With Other Requirements

The issuance of this permit does not release the Permittee from applicable State and Federal laws and regulations, and applicable local ordinances addressing subjects other than air pollution control.

#### 9.5 Liability

##### 9.5.1 Title

This permit shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located.

##### 9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the sources.

##### 9.5.3 Structural Stability

This permit does not take into consideration or attest to the structural stability of any unit or part of the source.

##### 9.5.4 Illinois EPA Liability

This permit in no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the source.

#### 9.5.5 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege [Section 39.5(7) (o) (iv) of the Act].

### 9.6 Recordkeeping

#### 9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.

#### 9.6.2 Records of Changes in Operation

A record shall be kept describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes [Section 39.5(12) (b) (iv) of the Act].

#### 9.6.3 Retention of Records

- a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit [Section 39.5(7) (e) (ii) of the Act].
- b. Other records required by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a particular permit provision.

### 9.7 Annual Emissions Report

The Permittee shall submit an annual emissions report to the Illinois EPA, Compliance Section no later than May 1 of the following year, as required by 35 IAC Part 254.

### 9.8 Requirements for Compliance Certification

Pursuant to Section 39.5(7) (p) (v) of the Act, the Permittee shall submit annual compliance certifications. The compliance certifications shall be submitted no later than May 1 or more frequently as specified in the applicable requirements or by

permit condition. The compliance certifications shall be submitted to the Air Compliance Section, Air Regional Field Office, and USEPA Region 5 - Air Branch. The addresses for the submittal of the compliance certifications are provided in Condition 8.6.4 of this permit.

- a. The certification shall include the identification of each term or condition of this permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.
- b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.
- c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

#### 9.9 Certification

Any document (including reports) required to be submitted by this permit shall contain a certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of the Act [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as an attachment to this permit.

#### 9.10 Defense to Enforcement Actions

##### 9.10.1 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit [Section 39.5(7)(o)(ii) of the Act].

##### 9.10.2 Emergency Provision

a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence:

- i. An emergency occurred as provided in Section 39.5(7)(k) of the Act and the Permittee can identify the cause(s) of the emergency. Normally, an act of God such as lightning or flood is considered an emergency;

- ii. The permitted source was at the time being properly operated;
  - iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and
  - iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.
- b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations.

#### 9.11 Permanent Shutdown

This permit only covers emission units and control equipment while physically present at the indicated source location(s). Unless this permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is removed from the permitted location(s), notwithstanding the expiration date specified on this permit.

#### 9.12 Reopening and Reissuing Permit for Cause

##### 9.12.1 Permit Actions

This permit may be modified, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition [Section 39.5(7)(o)(iii) of the Act].

##### 9.12.2 Reopening and Revision

This permit must be reopened and revised if any of the following occur [Section 39.5(15)(a) of the Act]:

- a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit;
- b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program;
- c. The Illinois EPA or USEPA determines that this permit contains a material mistake or inaccurate statement when establishing the emission standards or limitations, or other terms or conditions of this permit; and
- d. The Illinois EPA or USEPA determines that this permit must be revised to ensure compliance with the applicable requirements of the Act.

#### 9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation under Section 39.5(15) (b) of the Act.

#### 9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Illinois EPA copies of records required to be kept by this permit, or for information claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality [Section 39.5(7) (o) (v) of the Act].

#### 9.13 Severability Clause

The provisions of this permit are severable, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. The rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force [Section 39.5(7) (i) of the Act].

#### 9.14 Permit Expiration and Renewal

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance with the original permit conditions [Section 39.5(5)(1), (n), and (o) of the Act].

10.0 ATTACHMENTS

10.1 Attachment 1 - Example Certification by a Responsible Official

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Official Title: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

Date Signed: \_\_\_\_\_

JS:jar

10.2 Attachment 2 Baseline Emissions Summary

Seasonal VOM emissions from excluded units, in tons/season (TPS):

<u>Emission Unit</u>	<u>Proposed</u>	<u>Illinois EPA Determination</u>	<u>Notes</u>
Fugitives from Pumps, Valves, and Connectors	4.2310	4.2310	
Boilers (BS-1/BS-2)	<u>0.0736</u>	<u>0.0736</u>	
Total:	4.3046	4.3046	

Seasonal VOM emissions from units subject to further reduction, in TPS:

<u>Emission Unit</u>	<u>Proposed</u>	<u>Illinois EPA Determination</u>	<u>Notes</u>
Control 17 (Controlling LUWA L-1, Pot Stills PS-1, PS-2, Distillation Column DC-3)	2.3700	1.8732	1
Control 19 (Controlling LUWA L-2, L-3)	0.7962	0.7962	
Safety Them (ST-1)	0.5641	0.5641	
Control 22 (Controlling Drum Fill DF-1, DF-2, DH-1 and DH-2, Tank Farms TF-14)	4.0836	4.0836	
Control 18 (Controlling Tank Farms TF-3, TF-4, TF-5, TF-6)	0.2815	0.2815	
Fugitive from Load Operations	5.5384	5.5384	
Tank Farms TF-7, TF-8, TF-9, TF-13	6.5946	6.5946	
Tank Farms TF-1, TF-2 (Control 6)	0.1582	0.1582	
Drum Shredder System	<u>1.1250</u>	<u>0.0000</u>	2
Total:	21.5116	19.8898	

Note: 1: Illinois EPA adjusted emissions for overcompliance pursuant to the requirements in 35 Ill. Adm. Code 218.302 (85% control) as opposed to the requirements of 35 Ill. Adm. Code 218.986 (81% control).

2: Emissions from the shredder cannot be added to the baseline since emissions from the vats are already included in the current baseline. To add the emissions from the shredder, (i) subtract emissions from the vats and (ii) reconcile the fugitive emissions from the shredder with the requirements of Permit 95060216.

The source shall maintain records of actual seasonal VOM emissions for all emission units not considered insignificant activities in accordance with the recordkeeping and compliance procedures identified in the CAAPP permit starting with the 1998

seasonal allotment period of May 1 through September 30. The source shall submit the seasonal emissions information, as a component of the Annual Emissions Report by October 31 of each year, pursuant to 35 IAC 205.300.

**TOTAL SOURCE ALLOTMENT = 4.3046 + (0.88 X 19.8898) = 21.8066 TPS**

**OR 219 ATU**

1 ATU equals 200 lbs of VOM [35 IAC 205.130], or using standard conversion rate of 2,000 lbs per ton, 10 ATU's equals 1 ton.

JS:psj